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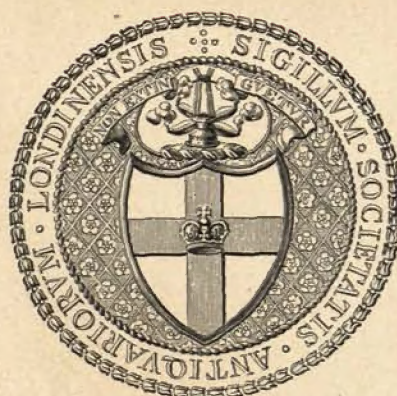
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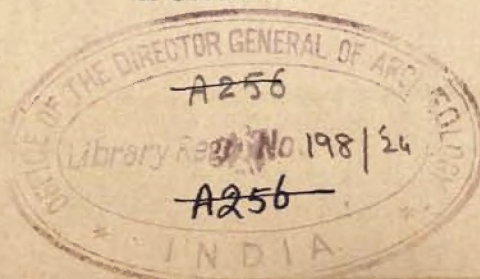
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SECOND SERIES: VOLUME XXIII



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I.—*Essex House, formerly Leicester House and Exeter Inn.* By CHARLES
LETHBRIDGE KINGSFORD, Esq., M.A., Vice-President.

Read 18th January 1923.

THE London Inn of the bishops of Exeter in the fourteenth century occupied the greater part of the space between the Temple and the bishop of Bath's Inn. The whole site was probably at one time the property of the Knights of the Temple, to whom Henry II in 1173 granted the church of St. Clement Danes.¹ In the thirteenth century the advowson of St. Clement's together with certain messuages opposite to the church had passed into the possession of the Canons of the Holy Sepulchre at Warwick.² When or how this took place I have not discovered. But these messuages, like the Temple, were held of the Honour of Leicester, and when in 1280 the Inn of the Canons opposite St. Clement's Church was granted to William de Breuse, bishop of Llandaff, for life, the grant was made with the assent of Edmund, earl of Lancaster,³ to whom that Honour belonged. In 1323 Walter de Stapledon, bishop of Exeter, was anxious to provide a London Inn for his see, and for that purpose desired to acquire the property of the Canons of the Holy Sepulchre in St. Clement Danes. With a view thereto he purchased from Walter de Cantelupe land at Snitterfield in Warwickshire with the advowson of the church there.⁴ In the following year he obtained the king's permission to exchange this property for five messuages and the advowson of St. Clement Danes together with some land at Hornsey.⁵ The exchange was confirmed by two fines levied in Michaelmas Term 1325. From another

¹ *Monasticon Anglicanum*, vi, 818; Eyton, *Itinerary of Henry II*, p. 170.

² A house of Austin Canons founded in the reign of Henry I.

³ *Cal. Pat. Rolls*, Edward I, i, 370. Breuse died in 1287.

⁴ *Augmentation Office, Miscellaneous Books*, 41, No. 105. Letters of Attorney by Stapledon authorizing William de Coderugge, prior of St. Sepulchre, to receive seisin in his behalf from Cantelupe. Dated 5th April 1323.

⁵ *Chancery Inq. ad quod damnum*, 167/4, P. R. O.; *Cal. Pat. Rolls*, Edward II, iv, 390; cf. *Register of Bishop Grandison*, 1539.

source it appears that the Canons had held four messuages together with the reversion to a fifth which had been demised for life to William de Bereford.¹ Bereford, who was Chief Justice of the Common Bench, died in 1326,² and Stapledon then became fully possessed of the property. The messuages were stated in 1324 to be held of the king as of the Honour of Leicester, having come into the king's hands through the forfeiture of Thomas of Lancaster in 1322; it was not known of whom the advowson was held.

Part at all events of the site farther east originally belonged to the Templars. The property of that Order passed on their dissolution in 1312 to the Knights of St. John, who did not, however, obtain possession of the New Temple on the Thames till much later.³ The New Temple was in the first instance granted to Aymer de Valence, earl of Pembroke. But in 1315 Aymer released his rights to Thomas, earl of Lancaster, who claimed it by escheat as the immediate lord of the fee. On the death of Earl Thomas the Temple fell to the Crown, and was again granted to Aymer de Valence for life, and when Aymer died in 1324 was granted to Hugh le Despenser. At an inquisition in 1327 it was found that the earl of Lancaster had been seised of a plot of land between the curtilage of the bishop of Exeter and the river; its dimensions were about 100 ft. on the west side, about 140 ft. on the east, about 140 ft. on the river, and about 130 ft. on the north. Stapledon, it was stated, had usurped possession of this plot under a concession by Aymer de Valence, and had included it in his dwelling-place.⁴ This plot probably covered the south-eastern corner of the future garden, and would have left about 60 ft. for the river frontage of the hostel of William de Bereford. Stapledon must have been in possession of the area between this plot and the Strand before 1324, but how or when he acquired it does not appear. It is, however, clear that the first building of the Inn is to be assigned to the latter years of Edward II.

¹ *Harley Roll*, I, 2, at the British Museum: 'Iohannes quondam prior de Warr. fuit seisitus de quattuor messuagiis, vna carucata terre, nouem solidis et decem denariis redditus cum pertinenciis in parochia Sancti Clementis Dacorum extra barram noui Templi London et Haringay, et aduocacione ecclesie Sancti Clementis Dacorum extra barram predictam et de reuersione unius messuagii cum pertinenciis quod Willelmus de Bereford adtunc tenuit ad terminum vite sue ex dimissione predicti tunc prioris in parochia predicta.' This statement was made in an Exchequer suit brought in 1524 in consequence of a claim that the prior of St. Sepulchre was liable to contribute to a 14th granted in 1512, for his possessions in the archdeaconry of London. The reference in the *Monasticon*, vi, 602, is incorrect; the carucate of land was clearly in Hornsey and not in St. Clement Danes. The rent is given as 10s. 10d. in the *Inq. ad q. d.*; it was in the Liberty of the abbey of Westminster.

² After July. He was a Warwickshire landowner, and may have been resident at the Canons' Hostel in 1318. Cf. *Cal. Pat. Rolls*, Edward II, iii, 146.

³ Their rights were not fully recognized till 1338.

⁴ *Master Worsley's Book* (ed. A. R. Ingpen), pp. 14, 15, 222-3. For the dispute between the Hospital and Thomas of Lancaster see also *Reg. Hamonis Hethe*, p. 91 (Canterbury and York Soc.).

Stapledon is said to have made great building here, but did not live to see his work completed. He was one of the unpopular ministers of Edward II, and was murdered by the London mob in Cheapside on 15th October 1326 as he was riding to dinner at his hostel in Eldedenes Lane.¹ In the evening his headless corpse was taken to St. Clement Danes and buried without reverence in a heap of sand outside the house which he was building there. One of those who were murdered with him was John de Padington, the keeper of his manor outside the bar of the New Temple.² Stapledon can only have obtained possession of the hostel of William de Bereford very shortly before his death, and must have left his new house unfinished. Thus the first bishop to occupy Exeter Inn was John Grandison, the great builder at Exeter and Ottery St. Mary.

On 9th March 1338 Bishop Grandison granted to John of St. Pol, the king's clerk, a lease for life of a tenement by the church of St. Clement with the easements of the chapel of St. Thomas annexed thereto. The tenement had sometime been occupied by William de Bereford. John of St. Pol's lease included houses and shops with their orchards and gardens extending from an old dike³ on the east to the wall of a tenement of the bishop of Bath and Wells on the west. The property was bounded by the highway on the north and by the wall of the Thames on the south. John of St. Pol was to have ingress and egress by a gate in the said wall, and the bishop reserved right of access to the chapel.⁴ Exeter Inn had apparently absorbed the ancient chapel of the Holy Ghost or

¹ Now Warwick Lane. Probably this was Stapledon's own hostel. The see of Exeter does not seem to have had a permanent London Inn before this time. At the close of the twelfth century Henry Marshall, bishop of Exeter, obtained the consent of the abbot and convent of Westminster to build a chapel on their estate, on land which he had bought for the use of the church of Exeter and all future bishops, in Langedich, now Prince's Street (*Westminster Abbey Muniments*, 17312; information supplied by the Rev. H. F. Westlake, F.S.A.). This inn had presumably been given up before Stapledon's time.

² *French Chronicle of London*, p. 52 (ed. by G. J. Aungier for the Camden Society); *Annales Paulini*, p. 317 ap. *Chron. Edw. I and Edw. II* (Rolls Series); Padington had licence in 1308 to enclose and build on a piece of waste land adjoining the churchyard of St. Clement Danes (*Cal. Pat. Rolls*, Edw. II, i, 56); this was immediately after Stapledon became bishop, and may possibly have been the first step towards the provision of the inn.

³ This may have marked the boundary between the lands of the Canons of Warwick and those of the Temple, and probably extended to the Thames. It is, perhaps, the ditch near Milford, in respect of which the prior of the Hospital of St. John at Clerkenwell was indicted in 1382 (Flower, *Public Works in Medieval Law*, ii, 59, Selden Society). The Essex Street sewer seems to have represented a stream running from St. Giles in the Fields to the Thames (see *Survey of London, St. Giles in the Fields*, i, in 'Description of Plan' after p. 135). This stream is probably to be identified with the dike.

⁴ *Cal. Pat. Rolls*, Edward III, iv, 127. The lease was confirmed by the dean and chapter of Exeter on 15th May, and ratified by Letters Patent on 6th September 1338.

St. Spirite, which lay a little to the east of Milford Lane.¹ In the reign of Elizabeth the porter's lodge at the outer gate of Leicester House was stated to be on the site of a chapel that had once belonged to St. Clement Danes.² The description of the property in 1338 agrees well enough if we suppose that the entry of the bishop's own Inn was a little east of the chapel. In any case the chapel of St. Spirite would seem to be the same as that of St. Thomas. Probably this chapel was demolished at the Reformation; it was certainly in use as late as 1484, when John Crowland bequeathed a taper to be offered at St. Spirite without Temple Bar.³ The tenement leased to John of St. Pol was obviously the old hostel of the Canons of the Holy Sepulchre. The lease included property on both sides of Milford Lane, since the western boundary was a tenement belonging to Bath Inn. The north end of Milford Lane was till a much later date arched over,⁴ and thus the hostel and its appurtenances had a frontage to the Strand on both sides of the Lane. Farther south Milford Lane would have formed the western boundary. Since the site thus leased reached to the Thames it probably included all that part of the river frontage (about 60 ft.) to the west of the plot which Bishop Stapledon acquired from Aymer de Valence. John of St. Pol, who was a clerk of the Chancery and became Master of the Rolls in 1338, for a time had custody of the Great Seal; this may explain the statements that on 26th July 1337 and 16th November 1338 the Chancery was lodged at the hostel of the bishop of Exeter.⁵ Afterwards in 1349 John became archbishop of Dublin, and on his death in September 1362 a messuage with eleven shops situated by the church of St. Clement Danes was taken into the king's hands. It was, however, found that the archbishop only held it for life by demise from the bishop of Exeter, who held it in chief as parcel of his barony.⁶

John of St. Pol's hostel is no doubt the tenement which some time previously to 1364 was let to Sir John de Montagu, who was a nephew of Bishop Grandison. Twenty years later, in 1384, Bishop Brantyngham leased at an annual rent of 10*l.* to John Michel, citizen of London, the tenement by St. Clement Danes Church which had been let to Sir John de Montagu, together with the adjacent houses and gardens and the Chapel of St. Thomas annexed thereto; the bishop reserved to himself the houses, shops, and small gardens between the entry of the said tenement on the king's highway and the Inn of the bishop of Bath; but Michel had power to let a tavern, chambers, and shops which he had built on

¹ Stow, *Survey*, ii, 92.

² Nichols, *Progresses of Queen Elizabeth*, vol. ii. The Queen's Palaces, p. 42.

³ *P. C. C.*, 21, Logge.

⁴ As shown in the Agas Map, and by Ogilby in 1677.

⁵ *Cal. Close Rolls*, Edward III, iv, 145, 617.

⁶ *Ibid.*, xi, 387.

the east of the gate.¹ Afterwards this lesser hostel was let to Sir John Golafre, who died in 1396. Golafre's widow married Edward, the duke of York who was killed at Agincourt, and thus the duke held the hostel for a time.² At an inquisition after the death of Edmund Stafford, bishop of Exeter, in 1419, it was found that he had held as parcel of his see a great hospice in St. Clement Danes, and also another hospice there which John Golafre and afterwards Edward, duke of York, had held. Neither hospice was of any value beyond outgoings. The bishop also held a tavern of the clear annual value of 40s., six cottages opposite the churchyard of the value of 53s. 4d., three tenements on the east of the churchyard valued at 3*l.* 10s., and twelve shops with solars that had been newly built and were of the annual value of 13*l.*³

It is somewhat curious that we have more information about the secondary hostel in the middle ages than about the bishop's own Inn. In 1376 a deed is described as sealed at the hall within the Inn of the bishop of Exeter without Temple Bar.⁴ In 1391 William Dighton, canon of St. Paul's, and in 1392 Guy Rouclif made their Wills in the hospice of the bishop of Exeter without Temple Bar.⁵ Edmund Lacy, who was bishop from 1420 to 1455, rebuilt the great hall;⁶ it is possible that the lesser hostel was then absorbed in the principal Inn of the bishop. In 1451 Agnes, widow of Thomas Haseley, accounted for 4*d.* as the farm of a void piece of land lying under the wall of certain tenements of the bishop of Exeter; it was 254 ft. long, 12 ft. broad at the east end, and 24 ft. broad at the west end;⁷ its exact position is not given, but as its length was from east to west it may perhaps have been a strip between the roadway and the Strand frontage; if so it must have eventually been acquired by the bishop. Bishop John Arundel died at his London Inn on 16th March 1504, and was buried in St. Clement Danes Church.⁸ There is a reference in 1508 to the chapel of the Blessed Mary within the bishop of Exeter's Inn;⁹ this was presumably the bishop's private chapel.

Otherwise the only reference which I have found to the Inn as the property of the bishops of Exeter occurs in a Chancery suit in 1549, from which it appears that one William Daunce had a lease from the bishop, confirmed by the dean and chapter, of certain messuages and tenements in St. Clement

¹ *Register of T. Brantyngham*, i, 559-60.

² The duke of York was living at Baynard's Castle before 1405.

³ *Escheator's File*, 1013. P. R. O.

⁴ *Cal. Close Rolls*, Edward III, xiv, 444.

⁵ *P. C. C.*, 2 and 7 Rous.

⁶ Stow, *Survey*, ii, 92; Leland, *Itinerary*, v, 3 (ed. Toulmin Smith).

⁷ *Ministers' Accounts*, 917/21, P. R. O.

⁸ Newcourt, *Repertorium*, i, 591.

⁹ Oliver, *Monasticon Exoniense*, p. 240.

Danes commonly called Exeter Rents.¹ But before the date of this lawsuit Exeter Inn, though not appropriated so soon as some of the other episcopal palaces in the Strand, had been alienated from the bishopric.

In 1539 Thomas Howard, duke of Norfolk, who had been granted the Nuns' Priory at Clerkenwell, is stated to have exchanged the nunnery with the bishop of Exeter for his place.² Norfolk was certainly in occupation of Exeter Place during 1541 and 1542; but on 28th October of the latter year, when praying that Bath Place might light on him, alleged that he had no place of his own in London, having entry in Exeter Place only by lending.³ Norfolk may have retained possession till his fall in 1546.

Though the duke was only a tenant, it is possible that the bishop was not altogether a willing lessor. For on 12th February 1548 royal letters were addressed to the bishop of Exeter and to the dean and chapter of Exeter on behalf of Sir William Paget. As a consequence of these letters the bishop, with the consent of the dean and chapter, granted Paget all that capital messuage and mansion vulgarly called 'Exetour Place', situated in the parish of St. Clement Danes, together with all cellars, solars, houses, stables, curtilages, gardens, etc., thereto belonging, and all messuages, houses, gardens, wharves, rents, and services whatsoever in the said parish, which the bishop held in right of his see or otherwise, the advowson of the parish church of St. Clement Danes alone excepted.⁴ The grant was to Paget, his heirs and assigns, to their proper use for ever, to be held of the chief lords of the fee. It was confirmed by Royal Letters Patent on 19th July 1548, and on the same date a further grant was made by the king to Paget of a parcel of land, lying between land now in Paget's tenure but late of Abraham Metcalfe and five others on the north, a garden of the Middle Temple on the east and south, and the garden of Exeter Place on the west. This parcel of land was 66 ft. broad at the north end, 70 ft. broad at the south end, and 130 ft. long. It was late parcel of the possessions of the late Hospital of St. John of Jerusalem and was of the clear annual value of 20*d.* It was to be held of the king in free socage as of the manor of Hampton Court.

The additional parcel of land thus granted to Paget is clearly to be identified with the strip (or part thereof) shown in the later plans as abutting north on tenements facing the Strand, and south on what was in the seventeenth

¹ *Chancery Proceedings*, Series II, 52/74, P.R.O. 'Exeter Rents', of course, refers to the tenements in the Strand.

² Wriothesley, *Chronicle*, i, 105.

³ *Letters and Papers, Henry VIII*, xvi, 1304; xvii, 730, 997.

⁴ The advowson was granted to the Protector Somerset, and on his attainder lapsed to the Crown. Later, Queen Elizabeth gave it to William Cecil.

⁵ *Pat. Roll*, 2 Edward VI, part 2, m. 2.

Paget Place, and it is so given in Hoefnagel's Map (printed in 1572) and in the Agas Map.¹

William Paget, who was created Lord Paget in 1549, died in 1563, and it was presumably from his heirs that Robert Dudley, earl of Leicester, acquired the house, which now again changed its name to Leicester House.² The date when Leicester obtained possession is fixed in the latter part of 1569 by an entry in the Churchwardens' Accounts of St. Clement Danes, where a payment from him appears for the first time in the year ended on 16th March 1570.³ Stow states that the house was 'new builded' by Leicester, but we have no information as to what was done; if the Agas map may be trusted he probably built the whole of the extreme eastern and western blocks. The Banqueting House⁴ is not shown in the Agas Map, and may be assumed to have been added by Leicester. There is no noteworthy history of the house in Leicester's time. The Earl's brother-in-law, Sir Henry Sidney, was staying there in December 1569 and again in November 1571.⁵ One of the scandalous accusations against Leicester is a story that Sir Nicholas Throckmorton died on 12th February 1571, shortly after dining at Leicester House, where the earl had administered poison to him in a salad.⁶ Sir Philip Sidney, who had been introduced by Gabriel Harvey to Edmund Spenser, probably obtained for the poet the patronage of his uncle. Early in the summer of 1579 Spenser went to live as a member of the household at Leicester House, whence he wrote to Harvey on 16th October of that year. At Leicester House Spenser and Sidney were in close association, and it was there in all likelihood that the meetings of the Areopagus, the literary club formed by Sidney and Edward Dyer, were held.⁷ It is somewhat strange that there is no record of any visit by Queen Elizabeth to Leicester House.

On 15th July 1584 the earl enfeoffed Sir Philip Sidney, William Knollys, George Digby, and Francis Knollys in Leicester House and other lands, to hold to his use for life, and then to the use of the countess for her life and after her

¹ Hoefnagel gives a ruder representation of the house and differs from Agas for the garden. These maps depend in part at least on material older than 1561. The instance of Paget Place indicates that the Agas Map was not derived solely from Hoefnagel. The use of the name 'Paget Place' points to an original earlier than 1570.

² There should be a licence to alienate; but I have not been able to trace it.

³ From 1556 to 1569 the Lord Paget appears as paying 5s. towards the clerk's wages. In the accounts for 1569-70 Lord Paget's name was first entered, but afterwards struck out, and the earl of Leicester substituted. The accounts are made up to the Thursday before Palm Sunday.

⁴ See pp. 23 and 34 below.

⁵ *MSS. of Lord De L'Isle and Dudley*, i, 256 (Royal Commission on Hist. MSS.).

⁶ *Leicester's Commonwealth*, ed. 1641, p. 27.

⁷ *Gabriel Harvey's Marginalia*, pp. 27-30, ed. G. C. Moore Smith; Spenser, *Works*, ix, 267-71, ed. Grosart.

decease to the use of the heirs of his body.¹ Leicester by his Will,² dated 1st August 1587, bequeathed Leicester House to his wife for life, with remainder to his bastard son Robert Dudley; if Robert Dudley died without heirs of his body the house was to go to the earl of Essex, who was son of the countess of Leicester by her first husband. One moiety of the stuff at Leicester House was left to the countess, whilst the other moiety was to remain there. After Leicester's death, on 4th September 1588, an elaborate inventory of the contents of his London palace was made for the purpose of probate. But early in 1590 under a writ of *diem clausit extremum* the sheriffs seized Leicester House and its contents in part satisfaction of a debt of 10,000*l.* for which Leicester had been bound to the queen in 1581.³ As a consequence a further inventory of the goods and chattels was taken on 3rd April 1590. The whole value of the contents of the house was then given as 478*l.* 7*s.*, though in the inventory for probate the valuation was no less than 3,198*l.* 14*s.* 2*d.* It is clear, however, that much property had been removed, or was not for some reason or other now included. On 1st June 1590 direction was given for the goods to be sold for the best price obtainable, and ultimately they were disposed of to John Sidley of Southfolke, Kent, and John Wakeman of Beckford, Gloucestershire, for 545*l.* The two inventories here referred to both give lists of the rooms, but I will defer their consideration for the present.

At the inquisition held in 1590 it was found that the earl had been seised in his demesne as of fee of a capital messuage and garden, which was then in the tenure of Sir Christopher Blount and of Lettice, countess of Leicester, his wife; its clear annual value was 50*l.* Leicester had also twenty other tenements, besides a messuage and wharf, and stable, all in St. Clement Danes, the total annual value of which was 57*l.* 12*s.*⁴ The countess had married as her third husband Sir Christopher Blount, who had been a gentleman of the earl of Leicester and was an intimate friend of her son. She survived to a great age, dying in 1634. It is possible that through the seizure she had lost her life tenure in Leicester House, and Robert Dudley his reversionary interest. But more probably it was by some family arrangement that the house passed after an interval into the possession of the young earl of Essex, and for the last time changed its name to Essex House.⁵

¹ Indenture recited in *Patent Roll*, 30 Elizabeth, part 13, *mm.* 20, 21. The consequent alienation having been made without licence (Leicester House being held in chief) pardon had to be obtained, which was granted on 25th October 1588, after Leicester's death. Sir Francis Knollys (or Knowles) was father of the countess of Leicester, and William Knollys was her brother.

² Printed in Collins, *Sidney Papers*, vol. i, *Memoirs*, p. 73.

³ In *Harley Roll*, D. 35, f. 71, the total amount of Leicester's indebtedness to the queen is given as 35,087*l.* 2*s.* 3*d.* See p. 48 below.

⁴ See p. 52 below.

⁵ It is, however, called 'Lestar House' as late as February 1592-3, when Robert Sidney was staying there.

Spenser marks the change in his *Prothalamion*:

Next whereunto there stands a stately place
Where oft I gained gifts and goodly grace
Of that great lord, which therein wont to dwell.

Yet therein now doth lodge a noble peer,
Great England's glory and the world's wide wonder,
Whose dreadful name late through all Spain did thunder.

For some years there is little more to record than before. Leicester had given lodgings at his house to relations and friends, like his brother the earl of Warwick, his wife's father Sir Francis Knollys, and her sister-in-law Lady Chandos.¹ Essex followed the same practice, and his sister, Penelope, Lady Rich, was often resident with him. Other friends whom he accommodated include the Spaniard, Don Antonio Perez, who when in England on a mission from Henry IV of France in 1595 lodged at Essex House. Philip Gawdy wrote on 16th September: 'I am resident either at Court or els continually with Don Antonio Perez at Essex House, whom my Lord useth with hye favor, and favors me mightely in regard of accompanying him.'² Another guest of the earl's was Fulk Greville, the friend of Sir Philip Sidney, who in September 1598 feasted the deputies from the United Provinces at his own lodging in Essex House.³ Essex himself entertained the deputies on 30th September; they were to have gone that day to Court, 'but my Lord of Essex made them so great a dinner that *neque spes neque mens &c.*, there were unmeasurable healths dranck amongst them'.⁴ In September 1595 Essex invited Antony Bacon, brother of the more famous Francis, to make his residence there, and began an intimacy which lasted to the earl's death.⁵ When in 1599 Essex sought to raise money by a mortgage on Essex House, Antony Bacon seems to have been his intermediary; this appears to be the foundation for Sir Henry Wotton's allegation that Bacon procured a gift of the house to himself by a threat to betray to Queen Elizabeth the earl's correspondence with James VI of Scotland.⁶ On his return to London in 1596 Spenser went once more to stay at Essex House, and it was in honour of the double marriage of the

¹ See pp. 34, 35, below.

² *Hist. MSS. Comm.*, 7th Report, p. 523. See also *Cal. State Papers*, Addenda 1580-1625, p. 379. For the friendly relations of Essex and Perez see *Salisbury MSS.*, v, 398; vi, 87; vii, 509-10.

³ Rowland Whyte to Sir R. Sidney.

⁴ Collins, *Sidney Papers*, li, 5.

⁵ R. Whyte to Sir R. Sidney on 27th September 1595: 'M^r Antony Bacon hath your Lordship's promised lodgings in Essex House, where my lord doth oft come unto him.'

⁶ Wotton, *Reliquiae* (4th ed.), p. 169; Spedding, *Francis Bacon*, i, 369; *Cal. State Papers*, 1598-1601, p. 222.

daughters of the earl of Worcester, which took place there on 8th November, that he wrote his *Prothalamion*. On 14th November 1598 Sir Gilly Merick made a very great supper at Essex House for the earl and other lords and ladies of his family; they had two plays, which kept them up till 1 o'clock;¹ it is possible that Shakespeare contributed to this entertainment, since his patron the earl of Southampton was a friend of Essex.

When Essex fell into disgrace after his return from Ireland in 1599, and on 1st October was put under restraint at York House, a household was continued at Essex House for the Lord and Lady Southampton and the family. But Lady Rich and Lady Southampton soon found it expedient to go into the country, lest their presence there might give offence at Court. Essex was confined for nearly six months at York House. His friends were active on his behalf, and early in March 1600 the Ladies Leicester, Southampton,² Northumberland,³ and Rich were all assembled at Essex House to receive him, which at that time hindered his release. By the queen's express commandment they all, together with Fulk Greville and Antony Bacon, removed. Eventually on 20th March Essex was allowed to come home with Sir Richard Berkeley as his guardian, who lay in the chamber next the earl and had all the keys in his custody. For five months more Essex was virtually a prisoner. His wife was not allowed to live with him, though permitted to visit him by day. Gradually he obtained a little more liberty, and played now and then at tennis or walked upon the open leads or in the garden with his wife, 'now he, now she reading one to the other'. Berkeley was removed in July, though Essex was not allowed to leave till the end of August. He then went into the country for a month, but on 1st October came back to Essex House, where at first he lived very private.⁴

Presently, however, the earl began to plot against the Court, and Essex House became the gathering place of discontented men. The crisis came early in February 1601, when three hundred persons were assembled at Essex House. The Court had some news of what was intended, and early on Sunday 8th February the Lord Keeper⁵ and others came to Essex House. The gate was shut, but after a little stay they were let in at the wicket to find the courtyard full of armed men. Some parley followed, and then the earl conducted them to his book-chamber, where he charged Sir John Davies to hold them in custody whilst he went to the City. Essex intended to use them in case of need as hostages, but after a while upon some misunderstanding they were released.

¹ Collins, *Sidney Papers*, ii, 91.

² Lady Southampton was first cousin to Essex.

³ Dorothy, sister of the earl of Essex.

⁴ Collins, *Sidney Papers*, ii, 130, 132, 177, 179, 181, 187, 191, 193, 205, 213, 216.

⁵ Sir Thomas Egerton; Sir William Knollys was one of the others.

Meantime in the City Essex had found that the people were against him, and ultimately with most of his followers took boat at Queenhithe and returned to Essex House, which was furnished with all manner of warlike provisions. There they prepared to defend themselves, till when at night two pieces of ordnance had been brought from the Tower, and the garden had been taken, their position appeared desperate. Thereupon 'Essex desired to parley with my Lord Admiral,' then in the Garden, and he upon the Leads, at which parley the Admiral willed that the Ladies might be sent forth, not willing to do them hurt'.² After this the house was presently surrendered and the earl taken to the Tower. The narratives of the parties concerned in this mad enterprise give a little information about Essex House. The Lord Keeper and his companions had been detained about three hours in the Withdrawing Chamber, whither the Ladies Essex and Rich had come down the better to pass the time. One Goodman saw Sir Gilly Merick on the leads over the Hall going towards Mr. Cuffe's chamber. Sir E. Michelbourne was going towards the chamber where the sermons used to be made, when he saw the earl come down another way; this chamber is probably the chapel, and the sermons will be those of the Puritan preachers who were in constant attendance at Essex House in January 1601.³

Essex was executed on 25th February. His widow, who was daughter of Sir Francis Walsingham and first married to Sir Philip Sidney, lived on at Essex House. But for a while the house seems to have been under the control of the earl of Nottingham, the Lord Admiral, who when the water supply was cut off by order of the Lord Mayor intervened and obtained the use of one small pipe. A few months later the removal of this also was threatened, and Lady Essex had again to appeal to the City.⁴ Apparently the pipe was then

¹ The earl of Nottingham. Another account makes Essex parley with Sir Robert Sidney, who had captured the garden. Stopes, *Life of Earl of Southampton*.

² Contemporary narrative ap. Bell, *Fleet Street in Seven Centuries*, p. 239.

³ *Cal. State Papers*, 1598-1601, pp. 547-8, 550, 585, and 1601-3, pp. 11, 13.

⁴ I am indebted to Mr. A. H. Thomas, the Records Clerk at the Guildhall, for a copy of the interesting letter which Lady Essex wrote on this occasion:

'After my verie heartie Commendacions to your Lordship and the rest. Whereas imediatlie after the death of my late unfortunate Lord certeine pipes of leade whereby water was conveyed into this house were cutt off by order from the then Lord Mayor and the rest of his brethren, and not longe after by like order and Consente one smale pipe was allowed againe by the request of the Lo. Admirall, whoe for the time had some interest in the house, but to pleasure me was content to deliver into my hands both the house and the right which by all your Consente he had in that Conveyance of water with Condision that I woulde discharge the Plumbers worke, which accordinglie I performed. For as muche as the Chamberlaine of London, as likewise the plumbers have signified unto my mother and mee that they have received a newe Commandement from you to abridge us of that litle allowance of water by Cuttinge againe the said pipe, which being but a verie small one doth yet afford

restored, but in 1608 the Lord Mayor wrote to the earl of Suffolk, who was father-in-law of the young earl of Essex, to explain the stoppage of the quill for the use of Essex House; the water in the conduits had fallen very low, and owing to the dearth it had been necessary to cut off several quills; moreover, complaints had been made of the extraordinary waste of water in Essex House, where it had been used for the laundry, stable, and various purposes which might otherwise be served.¹

Robert Devereux, third earl of Essex, was born at Essex House in 1591. He married a daughter of the earl of Suffolk in 1606, but the marriage turned out ill and ended in a notorious divorce in 1613. Most of the references to Essex House at this time relate to others than its owner, who was seldom there. Sir Josceline and Sir Allan Percy, brothers-in-law of his aunt, the countess of Northumberland, were resident there in 1605-6.² When on 18th October 1612 the Elector Palatine came to England to marry the Princess Elizabeth, Essex House was the place appointed for his first abode, though he cannot have remained there much above a fortnight.³ To this circumstance the neighbouring Palsgrave's Head⁴ owed its name. James Hay, earl of Carlisle, who had married Lucy Percy, a cousin of the earl of Essex, was often at Essex House, where his son Charles was baptized on 27th November 1618; as Carlisle's secretary Sir Francis Nethersole wrote often from Essex House between 1620 and 1624.⁵ From December 1627 to March 1628 Essex House was occupied by Robert and Dorothy Sidney, earl and countess of Leicester.⁶

good helpe to the necessarie service of this house and being taken awaye (as is uncurteouslie threatened by your Chamberlaine, notwithstandinge the charges I have beene at) will leave this poore familie utterlie unfurnished of so necessarie a provision: I most earnestlie intreate your Lo^{pp} and the rest to shewe my mother and mee this Christian and worthie respecte that seing yt ys but one smale Pipe already allowed to an ho^{ble} person and lefte unto us by him, which neverthesse hath been somewhat chargeable to me, you wilbe pleased to give order that yt maie be continued in such sorte as yt was meante to my Lo. Admirall when he desired yt. Whereby you shall doe an acte of Justice and Curtesie and make two poore Widdowes verie much behouldinge unto yow. And soe not doubtinge of your favorable resolucions herein, I Committ your Lo^{pp} and the rest to the best protection of thalmightie. From Essex house the 21th of Nov. 1601. Your Lo^{pp}s assured poore Freind Fra: Essex.'

Lady Walsingham wrote to the same effect, asking for the favour for the sake of her late husband 'Mr. Walsingham'. Cf. *Index to Remembrancia*, p. 554—ii, 184.

¹ *Ibid.*, ii, 321.

² *Cal. State Papers*, 1603-10, pp. 247, 308.

³ *Ibid.*, 1611-18, p. 153; he had removed before 4th November, when Chamberlain wrote: 'The Count Palatine continues in favour at Court, where he is now lodged in the late lord Treasurer's lodgings.'

⁴ Later, it gave name to Palsgrave Head Court, which was on part of the site of the Outer Temple. It does not seem to have belonged to Essex House. See p. 19 n. 1 below.

⁵ *Cal. State Papers*, 1619-23, pp. 111, 113, and 1623-5, p. 216.

⁶ The book of their household expenses at Essex House is preserved at Penshurst; it gives the names of guests entertained at dinner.

Lady Leicester was a sister of the countess of Carlisle, whom she visited at Essex House in November 1628.¹ The earl of Essex married again in 1631, and again his marriage proved unfortunate. The countess, who was formally separated from her husband in 1636, lived at Essex House till the outbreak of the Civil War, whilst the earl, as in earlier years, spent most of his time elsewhere.² On 11th March 1639 a moiety of Essex House was let in consideration of 1,100*l.* by the earl to his sister, the countess of Hertford, and her husband for their lives in survivorship; the lease, as we shall see, furnishes valuable details as to the house.³

The third earl of Essex is best known to fame as the Parliamentary general in the first years of the Civil War. It was at Essex House that he received the congratulations of the House of Commons after the battle of Newbury in September 1643.⁴ In 1644 the committee of both kingdoms met regularly at Essex House.⁵ The earl died at Essex House on 15th September 1646, and Pepys as a boy went to see him lying in state there.⁶ His only son by his second wife had died in infancy, and the earl by his Will, dated 1st August 1642, left Essex House to his elder sister Frances, wife of William Seymour then marquess of Hertford, for life. By a settlement made on 22nd March 1640, and recited in the Will, after the death of the marchioness Essex House was to go to Sir Charles Shirley, the elder son of his other sister Dorothy, with remainder to his brother Robert.⁷ The Will was contested by Lady Hertford, and fifteen years later was reversed; but before then a family agreement had been made for a division of the property, under which Essex House fell to the share of Lady Hertford, whilst the adjoining tenements were assigned to the Shirleys.⁸

Lady Hertford was living at Essex House in October 1646. On 3rd August 1650 the Council of State directed that Essex House should be used for quartering soldiers, but on 19th September Colonel Berkstead was ordered to deliver possession to the marchioness of Hertford, if on marching away part of his regiment he found he could dispense with the use of it.⁹ Lady Hertford's daughter, Lady Frances Seymour, was married at Essex House on 28th October

¹ *Cal. State Papers*, 1628-9, pp. 318, 392, 395.

² *Lives of the Devereux*, ii, 306. Lady Essex may have left Essex House when a moiety was leased to the earl and countess of Hertford in 1639.

³ See pp. 21-3 and 52-4 below.

⁴ Whitelock, *Memorials*, p. 74.

⁵ *Cal. State Papers*, 1644, pp. 17, 114, and 1644-5, pp. 128, 134, 145.

⁶ *Diary*, viii, 210.

⁷ *P. C. C.*, 185, Twisse. Charles Shirley died at Essex House on 7th June 1642, and Robert Shirley died in 1656.

⁸ *Lives of the Devereux*, ii, 470-4; E. P. Shirley, *Stemmata Shirleiana* (2nd ed.), p. 143.

⁹ *Cal. State Papers*, 1650, pp. 269, 346.

1652 to Richard Molyneux, Viscount Maryborough.¹ The bridegroom died within two years, and his widow married as his third wife the earl of Southampton. Her sister Mary married the second earl of Winchilsea. These genealogical details are necessary to the later history of Essex House.

In the first year after the Restoration the marquess of Hertford and his sons-in-law, the earls of Southampton and Winchilsea, all appear as resident at Essex House. Hertford was restored as duke of Somerset on 13th September 1660, but died six weeks later at Essex House on 22nd October.² His widow lived on there, though after the Great Fire Essex House was used for a time for the business of Doctors' Commons and the Court of Arches.³ Since 1651 a part of the house had also been let to Sir Orlando Bridgeman, who lived there as Lord Keeper from 1667 to 1672.⁴ Thus it chanced that Pepys was present there on 24th January 1669 for a meeting of the officers of the navy in the king's presence; he describes it as 'a large but ugly house'.⁵ Bridgeman may have obtained an apartment in Essex House as a friend of the family;⁶ the duchess of Somerset appointed him one of her executors and left him by her Will 200*l.* and her 'fine chessboard with men of crystal and ivory'.⁷ In 1673 the duchess's granddaughter Frances⁸ and her husband Thomas Thinne had an apartment in Essex House. The duchess died on 24th April 1674, and by her Will directed that Essex House should be sold, though Lady Frances and her husband were to have the use of their apartment with the coach-house and stable for six months.

On 16th May 1674 Arthur Capel, earl of Essex,⁹ wrote to his brother Henry that he heard that Essex House was for sale and was valued at about 7,000*l.* 'Tis a purchase I would rather make than anything I know, and seemeth not to be overrated. . . . It ought to be considered whether the House be in good repair. . . . I know my Lady Duchess was careless enough in her business, and therefore I suspect the timber and other things, if they come to be searched,

¹ *Cal. State Papers*, 1651-2, p. 468, with an Epithalamium composed for the occasion.

² *Ibid.*, 1660-1, pp. 35, 41, 374; *London Past and Present*, ii, 17.

³ W. G. Bell, *The Great Fire of London*, p. 215.

⁴ *Cal. State Papers*, 1667-8, p. 429. Numerous State Papers are dated from Essex House in this and the following years. Cf. Evelyn, *Memoirs*, i, 459.

⁵ *Diary*, viii, 209-10.

⁶ In the rate-books of the churchwardens of St. Clement Danes Bridgeman's name appears next that of the marquess of Hertford from 1651 onwards. At first he paid 10*s.* 10*d.*, Hertford paying 2*l.*; in later years he paid 1*l.* 10*s.*, and the Duchess paid 2*l.* Bridgeman's name appears for the last time in 1674.

⁷ *P. C. C.* 133, Hale. Proved 18th July 1677. The chess-board appears to be identical with one which belonged to Robert Dudley, earl of Leicester (*MSS. of Lord De L'Isle and Dudley*, i, 292).

⁸ Daughter of the earl of Winchilsea; her husband was ancestor of the marquess of Bath.

⁹ He had no connexion with the Devereux earls.

will be found faulty. . . . If you find it likely you may conclude for the house, which is the most convenient thing I could have. . . . I do imagine this being a noted house it will not be difficult to let it to some ambassador.'

Charles II agreed readily to a proposal to purchase the house for 12,000*l.* as a reward for the earl's services in Ireland. But by some means the information got about, and William Harbord (who was secretary for Essex in England), writing on 9th February 1675, thought that 'M^r Thinne'¹ will raise his price bravely when he hears of it'. Dr. Nicholas Barbon,² one of the most considerable building undertakers in London at that time, was already in treaty, and not long after, without waiting for a formal conveyance, entered on the Garden, 'which he hath absolutely destroyed and layed thoro' it the foundation of that street which he designes'. Essex was of opinion that the affair had been bungled, but was still hopeful in April that it might be arranged if a licence for building was withheld. Barbon was twice summoned before the council, and pressure was put on him, no one being more earnest than the king. But though it was alleged that Barbon might have cleared two or three thousand pounds by the proposal, he went on vigorously with his building, most of which he designed to have finished by the end of May.³

In the end the speculator triumphed,⁴ and, as a contemporary wrote, the site was 'converted into houses and tenements for taverns, alehouses, cookshops and vaulting schools, and the gardens adjoining the river into wharfs for brewers and woodmongers'.⁵ The Middle Temple had been anxious to obtain some concession, and in June 1675 Barbon agreed to dispose of portions of the site to the Society. On 16th May 1676 he formally conveyed to them the boundary wall of Essex House beginning at the north-west corner of Essex Court and extending by the Benchers' Garden and the Common Garden to a stone building adjoining the Thames;⁶ a part of the ancient wall still stands on the west side of Fountain Court. The Middle Temple further acquired beyond the boundary wall a strip of 7 ft. along the west side of the buildings of Essex Court, together with two plots of land; the one at the north-east corner of the Garden and east end of the Terrace, 96 ft. by 60 ft., which forms the site of New Court and numbers 1 and 2 New Court Buildings; and the other on the south and south-west side of the Benchers' Garden, 130 ft. by 26 ft., which now forms the site of numbers

¹ Thinne and his wife were the principal legatees.

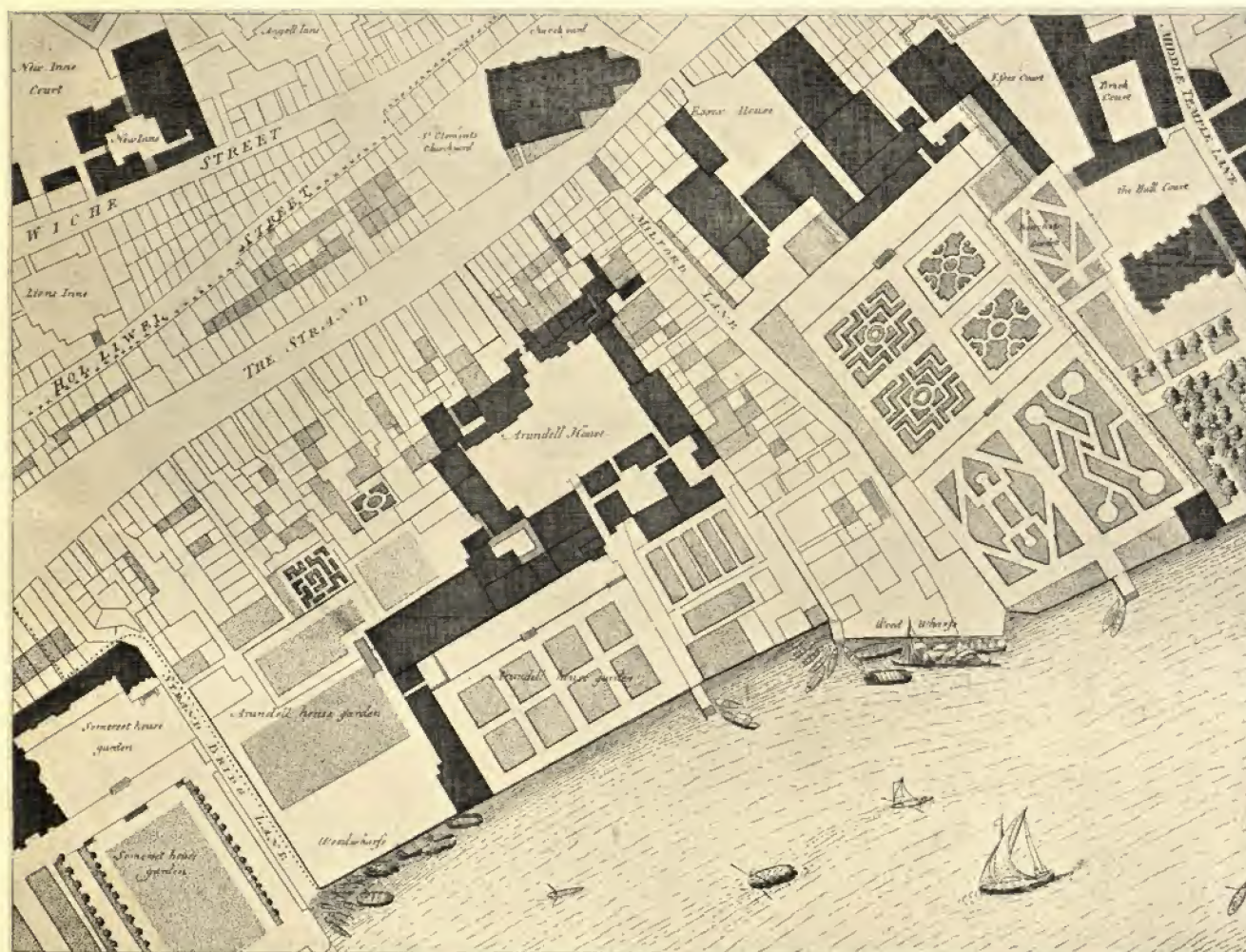
² Probably a son of Praisegod Barebones. He was a physician.

³ *Essex Papers*, pp. 226, 299, 309-13, 322-3 (Camden, 2nd series).

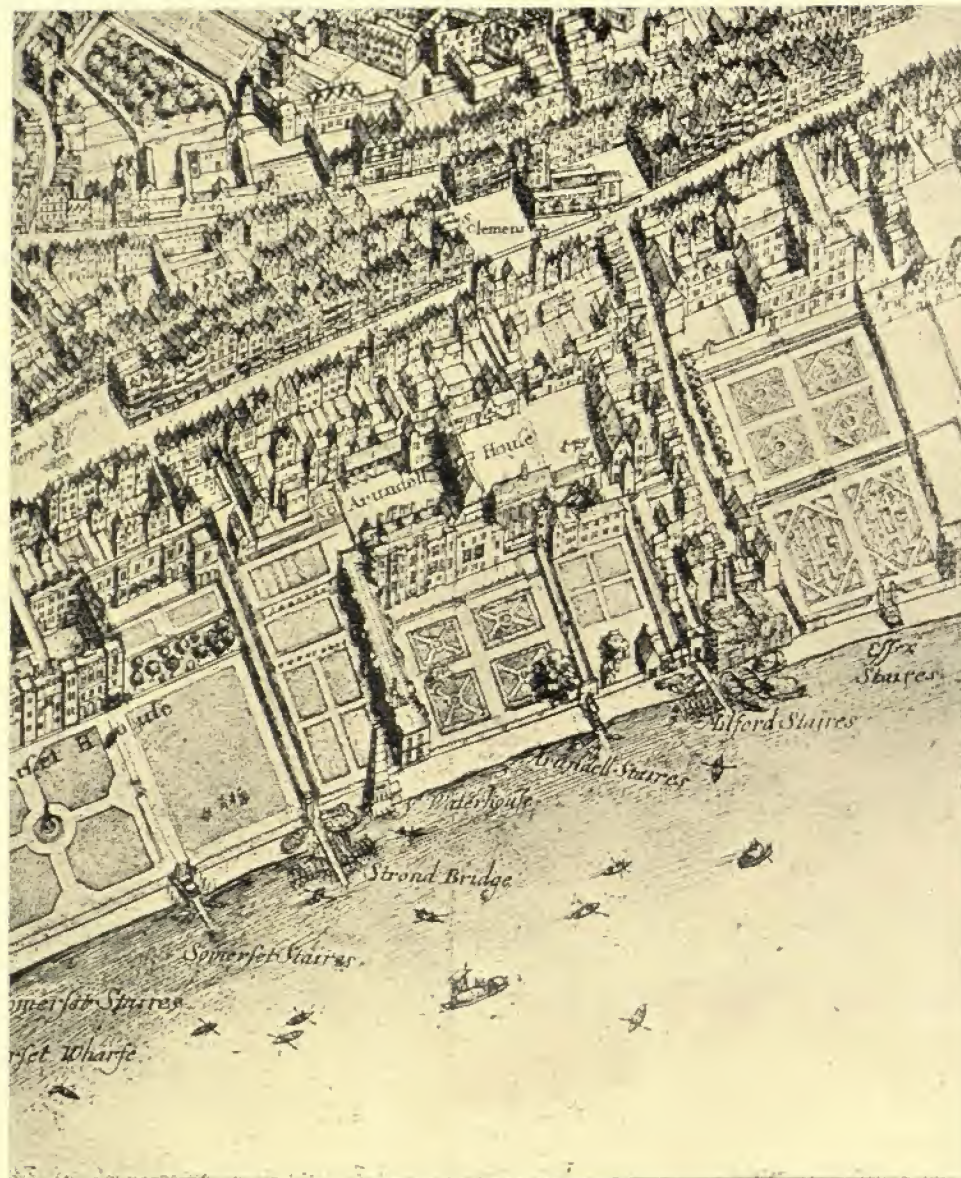
⁴ 'Dr. Barbone' appears in the Rate-book for 1675.

⁵ Reynolds, *Wells Cathedral*, Preface, p. lxxvii. Of Barbon's buildings, no. 29 Essex Street and the adjoining houses still survived in 1923.

⁶ This is the Banqueting House at the south-east corner of Essex House Garden. See p. 23 below.



Arundel House and Essex House, from Ogilby and Morgan's Map of 1677



Arundel House and Essex House, from Hollar's View of West Central London

1 and 2 Garden Court. The conveyance also included the wall, piers, and gates lately erected at the north-west end of the new buildings opening into Devereux Court, with the buildings lately erected by Barbon on the two pieces of ground conveyed to the Middle Temple.¹ The rest of the site is now covered by Essex Street and Devereux Court; in the latter, on a building which was formerly the Grecian Coffee-house, stands a bust of the third earl of Essex with underneath it the inscription: 'This is Devereux Courte 1676.'

Strype describes Essex Street as a broad, clean, handsome street, well inhabited by gentry, and Devereux Court as a large place with a good resort consisting of public-houses and noted coffee-houses. Amongst the latter was 'Tom's Coffee house', which was a favourite meeting-place of Akenside and other men of letters.² A part of Essex House was not pulled down in 1675-6; probably this was the portion let to Bridgeman, who died in 1674; his widow apparently lived on there, for her name appears in the rate-books as paying 1*l.* 10*s.* down to 1683 or later.³ In 1722 the Cotton Library was housed there, but seven years later Essex House 'being surrounded with buildings and therefore in danger of fire',⁴ the Library was removed to Ashburnham House, where it narrowly escaped destruction in 1731. This part of the house survived till 1777.

As in the case of Arundel House two of the chief sources of information for the plan and exterior of Essex House are Hollar's 'View of West Central London' (pl. 11)⁵ and Ogilby and Morgan's large-scale Map of 1677 (pl. 1). They disagree, however, in an important particular. The former shows clearly a large foreyard, the north side of which was formed by the houses in the Strand,⁶ and a small inner court. In the Map of 1677, which must have been drawn before the destruc-

¹ *Master Worsley's Book*, pp. 76-7, 245-6; *Middle Temple Records: Minutes of Parliament*, iii, 1291, 1294-1302, *Calendar*, pp. 121-2. Barbon concluded his agreement with the Middle Temple on 30th June 1675, to which formal effect was given by the conveyance in the following year. The Middle Temple has in recent years acquired a further part of the site of Essex House Garden, comprising the buildings in Fountain Court and houses in Essex Street.

² Strype, *Survey*, book iv, p. 117; *London Past and Present*, i, 496; ii, 16.

³ As to this part of the house, see further on pp. 27, 28, below.

⁴ *Report of the Committee of the House of Commons* ap. Additional MS. 24932, p. 4, at the British Museum.

⁵ This view was probably not completed till after 1656 (*London Topographical Record*, ii, 109), but may incorporate older material. A very similar representation appears in Hollar's 'Exact Surveigh' of 1669. The 'Long View of 1647' shows the house as seen from farther east and partly hidden by trees. 'The Prospect of London and Westminster from Lambeth' (date about 1674) is from a quite different point of view, giving the best representation of the west part of the front; but the original is very small, being hardly 1 in. square.

⁶ This explains how on 8th February 1601 Thomas Jonson, from a window which looked into Essex House, was able to see Sir Gilly Merick in the outer court or foreyard. *Cal. State Papers*, 1601-3, p. 11.

tion began in 1675-6, the inner court is not shown, and its site seems to be almost covered by buildings. In some other respects also it is difficult to reconcile the View and the Map. It is possible that the latter may include low buildings erected after the date of the former; or perhaps the shading in the Map may include pavement or cellarage which did not rise above the ground level;¹ but whatever the explanation, the Map as it stands is not helpful for the plan of the house beyond its general outline. Other sources of information are the two inventories of 1588 and 1590; they both specify about fifty rooms,² but unfor-

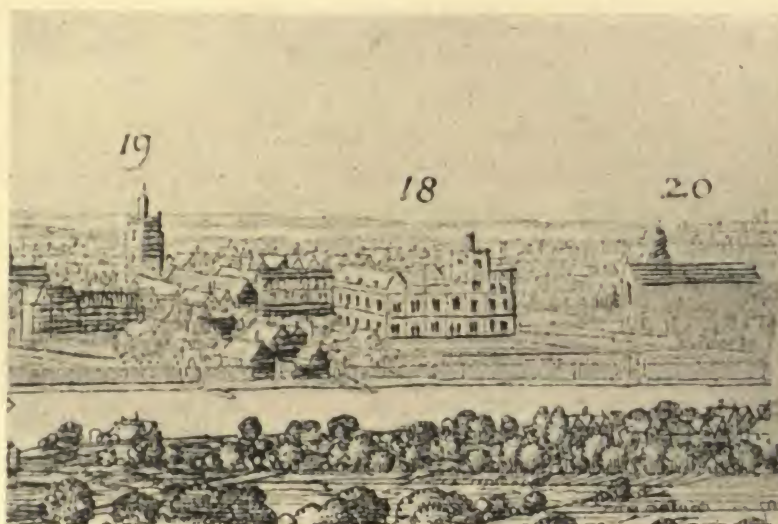


Fig. 2. Essex House from the 'Prospect' of 1674; 18, Essex House; 19, St. Clement Danes; 20, The Temple.

tunately give only slight indications of their positions. This defect is in part made good by the lease of 1639, which mentions in all about thirty rooms, and, albeit somewhat imperfectly, gives their positions.

Before dealing with the House itself I will briefly describe the site. On the Strand it adjoined Bath Inn or Arundel House on the west, and extended to a point somewhat east of the present Devereux Court. It has been stated that it included the Palsgrave's Head, but this is doubtful, and in any case there was a considerable interval between Exeter Inn or Essex House and Temple Bar. On the west side, except at the north end, it was bounded by Milford Lane, and on the east for the greater part by the Middle Temple, though at the Strand it adjoined a tenement which anciently belonged to the Knights of

¹ Neither explanation seems entirely to solve the difficulty. There is a similar discrepancy between the View and the Map in the case of Arundel House (see *Archaeologia*, lxxii, 259). There the shading in the Map on the south side of the Hall may probably represent a pavement.

² The Probate Inventory gives 52; the Commissioners give 47.

St. John.¹ The frontage on the Strand was probably about 350 ft., but except at the north end the breadth was considerably less and towards the Thames was no more than 200 ft. The depth from the river to the Strand was about 600 ft. The Strand frontage, except for the Gate-house, was entirely occupied by the subordinate tenements; there seem also to have been tenements belonging to Essex House on part of the east side of Milford Lane. In 1419 the bishop of Exeter had, besides his own hostel, another hostel, a tavern, and twenty-one smaller tenements.² The earl of Leicester in 1588 had twenty tenements.³ In neither case are any bounds given, and it is impossible to say whether there had been any variations in the site in the meantime, other than the small parcel of land acquired by Paget in 1548. The tenements on the Strand and the house itself had a joint depth of about 220 ft. On the south side of the house was a broad terrace, whilst nearly the whole of the extensive Garden seems to have been laid out as a pleasure ground, with a shrubbery to shield it on the western side; the small piece immediately north of the Benchers' Garden may have been an orchard. From the centre of the Terrace you descended by two flights of steps⁴ through the main alley of the Garden to Essex Stairs on the river. In the south-east corner of the Garden there was a building of which we have no precise description, except for the reference to it as a stone building, in the conveyance to the Middle Temple in 1676;⁵ it was, however, certainly the Banqueting House.⁶ It will be observed that Hollar's View and Ogilby's Map agree very closely in their representation of the Garden. Somewhere in the grounds there was a Tennis-Court; for in addition to the reference to the earl of Essex playing tennis when confined to his house in 1600, there is

¹ On 7th July 1524 the Prior of St. John leased to Patrick Michelson, citizen and draper, a tenement in St. Clement Danes, bounded on the west by the Inn of the bishop of Exeter, on the south by the Garden of the Middle Temple, and on the east by another tenement of the Prior's (*Cotton. MS.*, Claudius E., vi, f. 244). Between Exeter Inn and Temple Bar there were in the early sixteenth century nineteen tenements (some were possibly back-houses) all belonging to the Knights of St. John and running back to the wall of the Garden of the Middle Temple (*ibid.*, ff. 241, 244, and *Ministers' Accounts*, Henry VIII, 2402, P. R. O.; I have to thank Miss H. Hadley for these references). The numbers between the present entry of Devereux Court and Temple Bar run from 215 to 235. Anciently, no doubt, there were twenty-one tenements here, though some again may have been back-houses. But it seems clear that Exeter Inn cannot have extended much farther than the original entry of Devereux Court—a little farther east than the present entry. It is therefore unlikely that it included the site of Palsgrave Head Court.

² See p. 5 above.

³ See p. 51.

⁴ They correspond roughly with those which now exist between New Court and Fountain Court, and between Fountain Court and Garden Court in the Temple.

⁵ See p. 16 above. It appears in Hollar's View and in Morden and Lea's View of 1682 at the south-western boundary of the Middle Temple.

⁶ See p. 23.

mention of 10s. paid for the earl of Rutland on 27th November 1592 'at Essex House tennys court'.¹

The house itself, as already stated, had a foreyard, which was of an irregular shape, with extreme dimensions of about 100 ft. each way. On the west side of the foreyard there were various outbuildings and on the east a long range which included one of the Galleries. On the south a doorway² led into 'the

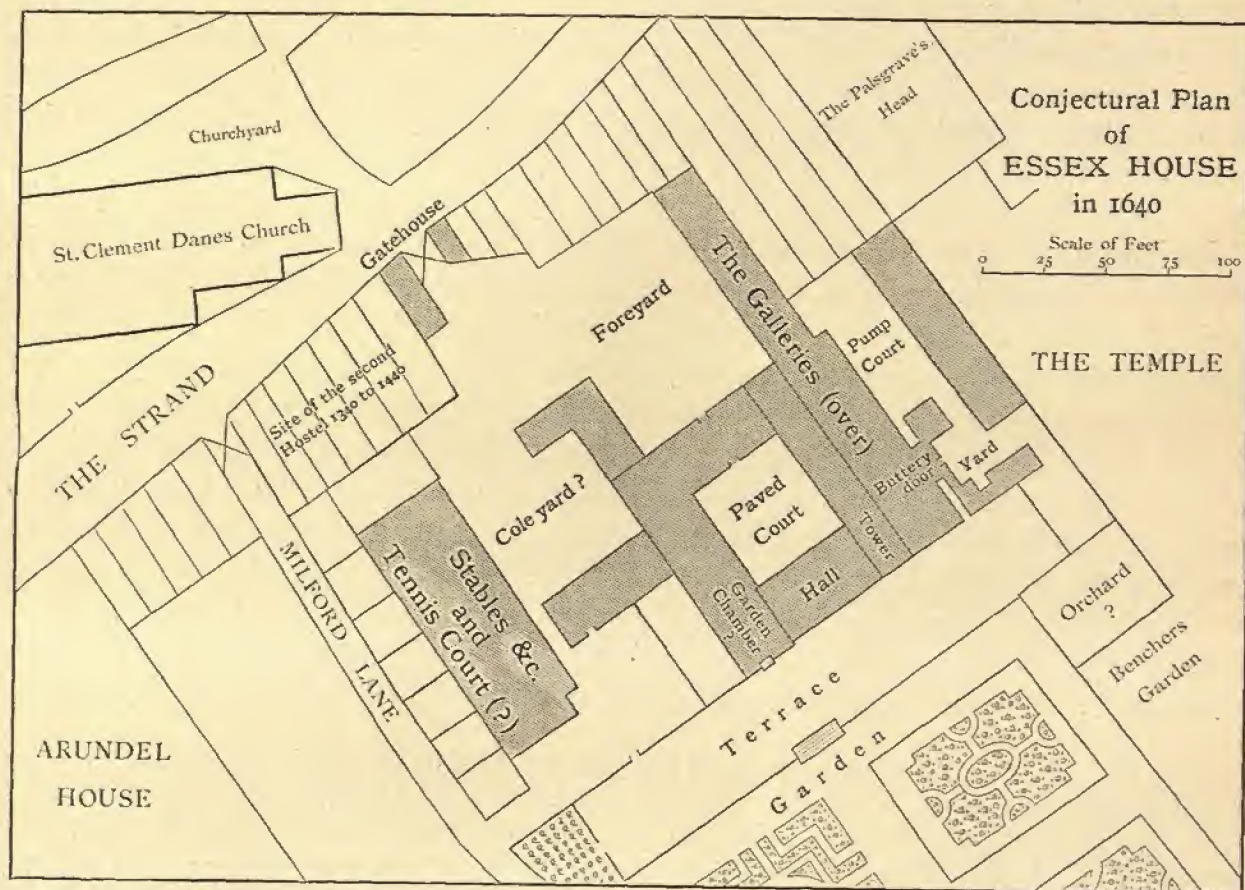


Fig. 3. Conjectural plan of Essex House in 1640.

square paved-court', of no great size, apparently somewhat under 50 ft. square. On the south side of this Court was the Hall. The principal part of the Garden front was formed by the Hall, with an extension eastwards, and the south end of the west block of the Court, the whole length of this part being about 150 ft. The remainder of the Garden front on the west was set back, so as to form a small garden plot or open court, with apparently an entrance from Milford

¹ *Rutland MSS.*, iv, 416 (Hist. MSS. Commission). The Tennis-Court may possibly have been included in the large block on the west side of the house, which, however, was certainly in part occupied by the stables.

² See Hollar's View (pl. 11).

Lane. The extreme width of the site at this point was about 280 ft., though the frontage occupied by buildings was some 30 ft. less.

The apartment let to the earl and countess of Hertford in 1639 was clearly on the east side of the house. The description of the rooms included in it alone enables us to deduce with some certainty the interior plan of the building. The best fixed point is afforded by the Tower, which from Hollar's View we learn stood at about the centre of the main Garden front. Over the Hall the View shows only one floor, but in the block on the east of the Tower there are four floors altogether. On the top floor there was a Gallery which ran north and south, and at its south end overlooked the Garden; the Tower was at the south-west corner of this Gallery.¹ From the Gallery there were stairs leading to the Tower, and other stairs down to the leads, whereon the earl and countess and their servants and attendants were to have liberty to walk. These leads were clearly on the roof over the Hall² as shown in Hollar's View, and it was here no doubt that the second earl of Essex used to walk when confined to his house in 1600. It must have been from the leads over the Hall that Essex held parley with the Lord Admiral in the Garden on 8th February 1601. Here also on that day Sir Gilly Merick was seen going to Mr. Cuffe's chamber, which must therefore have been one of the rooms on the third or top floor. At the head of the stairs leading to the third floor was a little room called the Stairhead Chamber and a wainscoted chamber. On the second floor there were four chambers with three entries and closets extending in length under the Gallery.³ The staircase which led to them came up from the eastward door of the Withdrawing Chamber. This staircase ascended from the ground-floor from about the little buttery door and yard adjoining to the eastward side of the house.

Thus far we seem to have had a description of the extreme south-eastern block. Another staircase, ascending out of and from the northward side of the Hall, led to the Great Chamber over the Hall, at the eastward end of which was the Withdrawing Chamber. Since the first stairs came up to the east door of the Withdrawing Chamber, that room and the Great Chamber must have been large apartments, and one or both of them would have been in part within the Tower. The Withdrawing Chamber had two chambers on its northward part, which were presumably on the east side of the paved court; there was another room over, which may have been in the Tower. On the northward part of the stairs from the Hall was an entry, which together with three chambers adjoining

¹ Called the Great Gallery in 1588, and the High Gallery by the Queen's Commissioners in 1590.

² There were also leads over the Galleries.

³ The description of these rooms as 'lying upon the eastward side of the square-paved court' can hardly be precisely accurate, since they were under the Great Gallery, the windows of which appear to have faced east.

thereto is described as 'being on the first and next floor over the cellars there, lying adjoining to the eastward side of the foreyard'. This is a little difficult of explanation, but the stairs and entry may have occupied the east side of the Court, the chambers, which were clearly under the Long Gallery, extending northwards along the foreyard. On the second floor above the cellars were four other chambers, and above them again was the Long Gallery;¹ these two floors had a staircase of their own. The Long Gallery had thus only two floors below it, whilst there were three floors under the Great Gallery. Hollar seems to indicate a continuous line of leads over the Galleries; if this is correct the difference in the floors may be accounted for by the fall in the ground. On the floor above the cellars there was a room or broad entry adjoining or leading into the Chapel. Of this room the earl and countess were to have only an undivided moiety; no doubt as giving access to the Chapel, of which there was to be common use. The position of the Chapel is not precisely fixed, but probably it was on the ground-floor under the north part of the Great Gallery, and lay along the west side of the Pump Court.² From the Pump Court two other staircases led up to three rooms which were perhaps above the Chapel.³

Naturally the lease of 1639 included a share of the domestic offices, as the Buttery or Pantry near unto the eastward end of the Hall, the Little Kitchen and the Larder. All these were no doubt on the ground-floor to the east of the Hall. On the east side of the house was a little yard or court called the Pump Court, and a yard or parcel of ground near the buttery door. Ogilby's Map of 1677 indicates the existence of two small yards in the required positions. The earl and countess of Hertford were also given the use of a little enclosed yard called the Cole-yard,⁴ heretofore parcel of the foreyard, and the Coach-house which lay most southward in the foreyard and the most southward stable in Milford Lane. The Hall, foreyard, gardens, Pump Court, and pump were to be occupied in common. The earl of Essex was to allow the porters and gardeners their accustomed housing, but the cost of wages and entertainment was to be shared. The charge for fires and lights in the Hall was to be shared, and so also were all the parish charges and taxes. The two families were to have the use in

¹ Called the Low Gallery in 1588-90.

² If the broad entry was at the north side of the Chapel, it would also have given access to the three chambers under the Long Gallery. The Chapel itself may possibly have occupied more than one floor; see p. 53 below.

³ The above description can at the best be only generally correct. There are some points which it is not easy to determine. One or two small rooms are not included here; see pp. 52, 53, below.

⁴ Its exact position is not specified, but it was probably on the west side, where Hollar's View seems to indicate a division of the foreyard, which does not appear on Ogilby's Map. It is impossible to determine the exact arrangement in this quarter.

common of the pews in the church of St. Clement Danes which belonged to the house.

The part of the house which the earl of Essex reserved to his exclusive use must thus have consisted of the north and west sides of the paved court and all the Garden front west of the Hall. Of this there is naturally no mention in the lease of 1639, and we have therefore only such information as we can deduce from a comparison of the lease with the inventories of 1588-90. Both inventories give us in all about fifty rooms, but taken by themselves afford only slight indication of position, the rooms in many cases being described only by the names of the occupants. The inventory for probate, after giving the contents of Mr. Nevil's Chamber, the counting-house, Mr. White's Chamber, and Mrs. Lettice Garrett's Chamber, goes on to the Great Chamber over the Hall, Mr. Garnett's Chamber, and the Withdrawing Chamber. Perhaps we may assume that the appraisers had gone up the stairs on the north side of the Hall and began their inventory on the first floor. From the Withdrawing Chamber they proceed to the Great Gallery, which is clearly the Gallery running south to the Garden. There then follow Lady Garrett's and Lady Rich's Chambers, the Chapel and its Closet, Lady Leicester's Chamber and Withdrawing Chamber, and the Withdrawing Chamber and Bedchamber of the earl of Essex. After these come a number of other chambers including those of Sir Francis Knowles and Lady Shandos (or Chandos), followed by the Low Gallery, which must be the one on the east of the foreyard. There were some other rooms of less importance, making twenty-three in all (other than the Galleries, Chapel, and Chapel Closet). This as it happens corresponds with the number of rooms described in 1639,¹ and we may assume that they were all in the east part of the house.

We come next to rooms which do not seem to be included in the lease. The first three are the Banqueting House, the Lower Room, and the Gardener's Chamber. Banqueting-houses were not unusually separate buildings, and so Rowland Whyte writes to Sir Robert Sidney in August 1600 that being summoned to Essex House he found the earl and countess 'in the Banqueting-house near the water-side'. This enables us to identify it positively with the two-storied building shown by Hollar and by Morden and Lea at the south-east corner of the Garden.² It thus becomes clear why the Banqueting House is followed by the Lower Room and the Gardener's Chamber. The Banqueting House proper would have been on the upper floor, and a room on the lower floor would have been a natural place for the Gardener's Chamber. In the

¹ I do not lay much stress on the similarity of the number of rooms.

² See pls. II and IV. It also appears on Ogilby's Map.

Commissioners' Inventory the furniture of all three rooms appears as in the Banqueting House.¹ The Banqueting House must have been left standing for some years after the main building was pulled down.

After this we have the earl of Warwick's Bedchamber, Closet, and Dining-Chamber, and the Great Chamber next the Garden. These we may suppose to be the principal rooms in the west part of the house, all perhaps on the ground-floor. The Garden Chamber may probably be the room at the south-west corner, adjoining the Hall, which room had a door facing the main alley of the Garden. There then come a number of smaller rooms, some of which at all events were occupied by servants and were perhaps on the upper floors of this part.² They are followed by the Hall, pantry, larder, and kitchen, and Mr. Atise's Chamber. This seems to complete the main part of the house, since next we have the Porter's Lodge and the Wardrobe; the latter may have been in the foreyard, for in the Commissioners' Inventory it is placed after the Low Gallery; the Armoury may probably have been in the same quarter.

The inventory of the Queen's Commissioners is perhaps less orderly. It begins with the Hall, followed by the rooms above and by Lady Leicester's apartments, after which we get the High Gallery with a number of other rooms³ apparently in the east part. Then comes the Low Gallery and the Wardrobe followed by the earl of Warwick's apartments, and the Great Chamber next the Garden. After this it returns to the chambers of the earl of Essex, Lady Garrett and Lady Rich, which from the other inventory appeared to be in the east part.⁴ It ends with the various offices, rooms of servants, chapel, vestry, Napery Chamber, Armoury, Rich Wardrobe, Banqueting House, and another Wardrobe. Some of these do not appear in the former inventory, which, however, gives a much fuller account of the contents of the Armoury.

If our knowledge of the plan of Essex House is less sure than it was in the case of Arundel House, we have the advantage of a detailed description of its contents in its palmiest days. Taken with the other inventories of the earl of Leicester's possessions at Kenilworth, Wanstead, and Benington, it gives us an amazing story of the wealth of a great Elizabethan noble.⁵ For detail reference must be made to the inventories themselves, but I may here call attention to some of the more striking features. The Probate Inventory, as mentioned above, is much fuller than that of the Queen's Commissioners, the valuation in

¹ See p. 51.

² In all this part there were apparently two upper floors.

³ In all there were seventeen, besides the High Gallery.

⁴ These five make up the number to twenty-two for the east part.

⁵ The Probate Inventory values the goods at Leicester House, Wanstead, and Kenilworth at about 8,000*l.* The Earl's goods at Benington in Hertfordshire were valued at 117*l.* 3*s.* 4*d.* (*Exchequer (K. R.) Memoranda Roll*, 398, *m.* ccclix). The house at Benington contained twenty rooms.

the former being 3,198*l.*, and in the latter 478*l.* only. The difference is to a great extent made up by the armour, valued at 436*l.* as against 40*s.*, and the plate, valued at over 1,040*l.* as against nothing. There is also an immense quantity of rich wearing apparel entered for probate, though none is given in the later inventory. Of the actual furniture the countess of Leicester had perhaps removed some part of her share, but there is much which appears in both inventories. In the earl of Warwick's rooms most of the furniture remains in the second inventory, though the valuation is given as only 54*l.* instead of 109*l.* From the earl of Essex's apartments nearly all the furniture had been removed, and what was left was valued only at 50*s.* in place of 75*l.* I can only specify a few of the most interesting items. Of the furniture proper the most noteworthy thing is 'a sweet-wood table standing upon four bears',¹ in the Low Gallery. In the *Oxford Dictionary* sweet-wood is described as a lauraceous timber from the West Indies, and the first instance of its use given is dated 1607. The bears were of course the Warwick badge; they appear again in the description of 'a great glass in a very fair frame, with bears and ragged staves on the top'.² The earl of Warwick's bed had also bears and ragged staves embroidered on the counterpane. This bed was valued at 33*l.* 6*s.* 8*d.*; the countess of Leicester's bed and its furniture was valued at 25*l.* and the earl of Essex's bed at 10*l.*³ There were of course a great quantity of hangings, most of them described as old; eight pieces in Lady Leicester's room were nevertheless valued at 20*l.* A number of musical instruments appears: 'an instrument with sundry stops in it' in the Great Chamber, 'a great instrument made like a wainscot cupboard' in the Garden Chamber, 'an old pair of virginals all broken' in Lord Warwick's Dining Chamber, and 'two pair of old harp virginals' in the Garden Chamber; the Commissioners omitted the last, but added a chest of vyalls, and a bandore in a case. At Leicester House there was nothing else for recreation, but at Wanstead we find a pair of playing tables of bone with hinges and clasps of silver, and a billiard table with the tools appertaining to it, and an old buckram cover.⁴

The inventories include a great number of pictures. The Probate Inventory mentions eighty-one pictures besides maps; only in four instances is the subject of the picture given. For one we have the engaging title of 'A Butcher

¹ In the Commissioners' Inventory it is described as 'a rounde table of sweet-wood underpropped with beares'; the table alone is there valued at 20*s.* At Wanstead also there was a dining-table of sweet-wood, and at Benington a little table of sweet-wood. See also pp. 34, 39, 44, 49.

² See p. 41.

³ See pp. 32, 33, and 35. The two first are valued by the Commissioners at 20*l.* and 26*l.* 13*s.* 4*d.* respectively.

⁴ See pp. 29, 35, 36, 46, below.

and a Whore'; in another list,¹ whether through better information or greater discretion, it is called a picture of 'a butcher and a maid buying meat'. The total value of the pictures was assessed at under 10*l*.² The Commissioners give only fifty-one pictures, but name the subjects of a number of portraits; they put a better value on them at nearly 15*l*.; but the highest price, for a portrait of the Queen, was no more than 1*l*.³ The earl of Leicester's pictures were, however, described by W. J. Thoms in *Notes and Queries*⁴ many years ago, and I will not deal with them further here.

Of books there were 220, great and small, valued at 10*l*. The Commissioners found a chest with certain books in French, Latin, Italian, and Dutch, and valued them at 5*l*. None of the titles is given, but at Wanstead there were an old Bible, two volumes of the *Acts and Monuments* (by John Fox), old and torn, eight psalters, and a service book.⁵

The plate, both silver and gilt, was as already mentioned of great value—1041*l*.—and the total weight 4,110 ounces. The largest piece of silver was a charger weighing 68 ounces. A gilt spice-box in the form of a bear weighed 63½ ounces. There were other articles, such as a salt cellar of mother-of-pearl in the fashion of a swan and garnished with silver, which could not be included in the weight.

In the Probate Inventory one of the most remarkable heads is the Armour,

¹ *Notes and Queries*, 3rd ser., ii, 225, where it is described as 'a devise made by Hubbard on clothe.' In the same list appears 'The Countesse Leycester whole proportion in clothe and my yong lord standing by hir, made by Hubbert 1584.' In the Lumley Inventory, 1590, there appear 'My La. y^e second wife daughter to the Lo. John Darcy of Chiche, drawn by Hubbart': 'Thomas the 3rd Lo. Darcy of Chiche done by Hubbart': 'Sr. John Hawkins, Treasurer of the Admiralty by Hubbart': and 'Mr. Edward Dyer of the Court'. In an Account Roll of the earl of Northumberland in 1584-5 appears 'To Mr Hubbard in full payment of his Lordships picture of Madame Dundragoe, 12*l*.' Nothing more seems to be known of Hubbard. I am indebted to Mrs. R. L. Poole for these references.

² See pp. 29, 30, 32, 35, 41, below.

³ See pp. 49, 50, below.

⁴ *Notes and Queries*, 3rd ser., ii, 201 (the pictures at Kenilworth, numbering forty-one and twenty-three maps), 224-6 (the pictures at Leicester House numbering ninety, and at Wanstead numbering fifty-nine). The Probate Inventory gives forty-four pictures at Kenilworth, eighty-one at Leicester House (with 36 maps), and fifty-four at Wanstead. See pp. 46 and 47, below. In the Inventory of Kenilworth made in 1583 a list of forty-four pictures, with names, is given (*MSS. of Lord De L'Isle and Dudley*, i, 290-1, Hist. MSS. Commission). In the valuation of the Earl's goods at Benington six backed chairs and eight pictures in the Gallery were priced at 3*l*.; there were four small pictures in another room. *Exchequer* (K. R.) Memoranda Roll, 398.

⁵ It has been alleged (*Gent. Mag. Libr.*, xviii, 31) that Leicester's books formed the foundation of the Lambeth Palace Library. Mr. Jenkins informs me that this story seems to rest on the fact that there are at Lambeth a few Greek books which once belonged to Leicester. Two similar books seem to have been borrowed by James I, and never having been returned, passed with the Royal Library to the British Museum.



Plan of the district, from Morden and Lea's Map of 1682

407 Devereux Court



View of the district, from Morden and Lea's Map of 1682

valued at 436*l*. Besides suits of armour, the most costly of which was a complete suit graven and gilt, valued at 25*l*., there were great quantities of arms and weapons of all sorts; 100 cuirasses, 57 corslets, nearly 400 morions, 76 muskets, 372 calivers, 442 black bills, and 280 bows and arrows, besides smaller quantities of other articles.¹ With such a formidable armoury, it is easy to realize how a great noble had it in his power to stir a dangerous rising like that of Essex in 1601.

I may in conclusion compare the existing site of Essex House with the ancient building. The greater part is covered by the houses in Essex Street and Devereux Court. The front in the Strand has been set back to widen the street, which originally was very narrow. The north end of Essex Street marks, however, approximately the line of entry by the Gate-house. Strype mentions that the passage into Essex Street had been of late widened and made more convenient. Since the tenements on the Strand did not belong to the duchess of Somerset's executors, Nicholas Barbon was probably not able to provide a better entry in 1676. The narrower entry is shown in Morden and Lea's Map of 1682 (pl. iii) and probably represents the ancient gateway. Otherwise the street seems to be as it was at first laid out. The lower part is nearly on the lines of the main alley of the Garden, though somewhat more to the west. It seems to have been raised to avoid the steep fall of the ground. The archway at the south end of the street stands at a point which would have been some little way up the Garden from Essex Stairs. It must have been built about the same time as the street since it is shown in Morden and Lea's View (pl. iv). The south side of the archway has been altered, but on the north it appears to retain its original form. On the river side of this archway there were wharves covering what had been the lower end of the Garden. The site of the Banqueting House was nearly as far down as the south-west corner of the Middle Temple Library. Little Essex Street comes in from Milford Lane on the line of the Garden front, which is continued in the first part of Devereux Court and across New Court in the Middle Temple. Devereux Court turns north at a point which would seem to be just east of the range of buildings which contained the Galleries. The curious turns in Devereux Court may possibly follow the irregularities of the original building on its west side. It is probably here that a part of Essex House remained till 1777. The block on the west side of the paved court was apparently nearly on the same lines as the east side of Essex Street. The projection of the corner of Essex Street and Devereux Court

¹ See p. 43 below. The armour at Kenilworth was valued at 328*l*. 4*s*., besides ordnance valued at 150*l*. (*Harley Roll*, D. 35, ff. 54 and 66). See p. 47 below, and *MSS. of Lord De L'Isle and Dudley*, i, 296.

is explained if we assume that part of the ancient building was left here in 1676.¹ Accepting this, the corner marks the position which I have suggested for the Garden Chamber. On its site in 1777 was built the Essex Head tavern, which a few years later became the meeting-place of Dr. Johnson's Club.

APPENDIX

I. INVENTORY FOR PROBATE OF THE GOODS OF ROBERT, EARL OF LEICESTER.

1588.

In *Harley Roll*, D. 35, at the British Museum there is a contemporary certified copy made from the original in the Prerogative Court of Canterbury. There are two Rolls, the principal one containing the Inventories of movable goods, chattels, etc., and the second, and smaller Roll, a schedule of the Earl's manors and lands as bequeathed by his Will, with a copy of the Will. The larger Roll is made up of seventy-one large sheets of paper written on one side only. Only the first part dealing with Leicester House immediately concerns us here, but a summary of the remainder is given for the purposes of comparison. It does not appear to be a complete Inventory of all the Earl's property; for he had certainly goods at Benington, in Hertfordshire, see p. 24 *n.* 5 above, and probably at Langley. There is a magnificent Inventory of the Earl's goods at Kenilworth in 1583, now preserved in the manuscripts of Lord De L'Isle and Dudley at Penshurst, of which an account is given in the Report published by the Royal Commission on Historical Manuscripts (vol. i, pp. 278-98).

LEICESTER HOUSE.

An Inventorie of all the goodes of the right honorable Robert, late Earle of Leicester f. l. whiche were remayninge at Leicester house at the tyme of his decease, taken and praised the — daye of — by John Ratcliffe, Esquire, Edward Williams, Esquire, Nathaniell Tracye, gentleman, James Barodell and Gilbert Godfrey, Cittizens and upholders of London.

In Mr Nevils Chamber.

In Primis. Five peeces of hanginges conteyning C. flemmish ells fille	ix <i>l</i> .
Item, one Bedstead covered w th popinioy greene Clothe, lined w th red taff,	} vij <i>l</i> .
embrodered w th blacke velvet, ould and stayned.	
Item one fether bed, a mattres, boulster and a downe pillow.	
Item, one lynnne quilte.	
Item, twoo blankettes.	

¹ Morden and Lea's View, which was printed at the foot of the Map of 1682, shows what is apparently intended for an Elizabethan building (with characteristic chimneys) at the north end of the line of roofs running up from the archway.

Item, one pallett bedd and bolster, one blankett. Item one Counterpointe
of Tapestry, ould. } xls.
Item, one ould little table. }
Item, one old chaire and blacke stool covered wth lether. }
Item, a picture of a butcher and a whore.¹ Item a mapp of Holland. } iijs. iiij*d*.
Summa xvij*li*. ix*s*. iiij*d*.

In the counting house.

In primis five peeces of hanginges old. v*li*.
Item, two Danske or Venis Chestes guilt. xxx*s*.
Item, a tabell of deale borde vppon a frame. Item, v blacke chaires }
covered wth lether, very olde. Item, ij small tables, i Courte table and the } xijs.
other a foulding table upon a frame. }
Item twoo old greene carpettes of Clothe. vjs. viij*d*.
Summa vj*li*. xvij*s*. viij*d*.

Mr Whites Chamber.

Item, a liverie bedsteed, a fether bed and a bolster, old. Item, ij blankettes, } liijs. iiij*d*.
old. Item a greene sett² rugg ould. Item a horse cloth. }
Summa patet.

Mr^s Lettis Garrettes Chamber.

f.2.

Item, a sloop bedsteed covered wth greene Clothe, one fetherbed and }
a bolster, one pillowe and one Mattres. Item, one blankett, ould. Item one } xxx.
white Irishe rugg, ould. Item one ould peece of hanginges conteyninge 20 ells. }
Item one old Chaire covered wth velvett, vtterly past service. Item, twoe } iiij*li*. vjs. viij*d*.
lowe stooles and a footstoole past service. }
Summa iiij*li*. vjs. viij*d*.

The Greate Chamber over the hall.

Item, v large peeces of hanginges wth the Queenes Armes in the border, } viij*li*.
very ould. }
Item, a longe table wth a frame of Walnut tree, another table wth tressells. } xiijs. iiij*d*.
Item v formes, an old plaine courte cubbord, twoe old joyned stooles. }
Item, an old chaire covered wth grene clothe wth vj highe ould stooles } xiijs. iiij*d*.
covered suteable. }
Item, an Instrument wth sundry stopes in it wth a frame of beache. liijs. iiij*d*.
Item a paire of highe Aundirons, a pair of tonges and a forke. vs.
Item a map of the worlde. iijs. iiij*d*.
Summa xij*li*. viijs. iiij*d*.

¹ Elsewhere called 'A devise made by Hubbard on clothe of a butcher and a maide buying meate'.
Notes and Queries, 3rd ser., ii, 225.

² *Sic* in original; probably an error for 'felt'.

In Mr. Garnettes Chamber.

In primis, one peece of hanginges, old.	xxvs.
Item, a picture of Venus and Cupid manecing her w th his darte. ¹	iijs. iiij <i>d</i> .
Item, a feild bedsted covered w th greene cloth w th curtaines suteable, ould,	} v <i>li</i> .
a fetherbed and a bolster, one paire of pillowes. Item, one white old quilt and	
a quilte of greene mockado, ² old, ij blankettes.	
Item, an old chaire covered w th leather, a greene clothe stoole, old, a square	} vs.
lowe stole past service, a table standing vpon tressells.	
Item, a stander covered w th leather.	vs.
Item, twoe ould featherbeddes, ij blankettes, ij bolsters, ould.	} iiij <i>li</i> .
Item, one ould Counterpointe of Woollen Imagerye, one other Counter-	
pointe of turquoy stuffe, ould.	
Item, three ioyned stooles, an old coffer covered w th leather.	vs.
Summa x <i>li</i> . iijs. iiij <i>d</i> .	

In the Wthdrawing Chamber next the greate Chamber over the Hall.

Item, v peeces of ould hanginges of course pillos. ³	viiij <i>li</i> .
Item, a foulding table of Walnut tree, standing vpon a foulding broken	} vjs. viij <i>d</i> .
frame. Item, a leather chaire and twoe blacke stooles covered w th leather,	
very ould.	
Item, a lowe Chaire and v lowe stooles covered with crimson velvett,	} xvs.
very ould.	
Item, three little Mapps and a latten Candlesticke.	iijs. iiij <i>d</i> .
Item, a paire of Aundirons.	ijs. v <i>d</i> .
Summa, ix <i>li</i> . vjs. v <i>d</i> .	

f. 3.

In the greate Gallerye.

Item, a high Chaire, twoe backe stooles, vj high stooles, iiij ^{or} stooles, ij	} iiij <i>li</i> . xs.
foote stooles, all covered w th greene velvett, ould and much worne.	
Item, a long foote Turquoy carpett.	iiij <i>li</i> . vjs. viij <i>d</i> .
Item, twentie eight pictures.	iiij <i>li</i> . vjs.
Item, a paire of latten aundirons.	xiijs. iiij <i>d</i> .
Item, a square table.	ijs. v <i>d</i> .
Item, eight mapps.	iiij <i>li</i> .
Summa xj <i>li</i> . ijs. v <i>d</i> .	

In the Ladye Garrettes Chamber.

Item, eight peeces of hanginges, very ould.	vj <i>li</i> .
Item, a feild bedsted ⁴ covered w th stitcht taffatie, blacke and white, w th the	} x <i>li</i> .
tester and curtaines. Item, a downe bed of fustian. Item, a course matres,	
ij linnen quiltes, a little crimson velvett carpett, olde. Item, one fustian	
blanckett, one wollen blanckett, one greene rugg, a quilte of crimson taffata,	
suteable, much worne, to the bedd, twoe pillowes. Item, a chaire covered w th	
Crimson velvett, one high stoole, and a square stoole suteable.	

¹ Elsewhere called 'A picture of a naked Lady sleeping and Cupid menaicing hir with his darte'.
Notes and Queries, 3rd ser., ii, 225.

² Woollen stuff in imitation of velvet.

³ Perhaps 'plush'; see under 'pelluce' in N.E.D.

⁴ A portable or trestle bedstead.

AND EXETER INN

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Item, a courte Cupbord, ij stooles of wainscott, a little feild table.

Item, twoe ould turquoy Carpettes.

Item, a paire of Aundirons and a fire shovell.

Summa xvj*li*. xvs. vjd.

vs.
vijs.
ijs. vjd.

In the Inner Chamber to that.

Item, a fetherbed, a boulder, an old blanckett, an old pillowe, an old quilt
of redd satten, a travos¹ of purple bagett,² an old close stoole, a fouldinge table } ls.
of Wainscott.

Summa ls.

The other Chamber to that.

Item a fetherbed, a boulder, and old course blanckett, an ould Counter-
pointe of tapestrie, a table vpon tressells. } xxxijs. iiij*d*.

Summa patet.

The Ladie Riches Chamber.

f. 4.

Item, vj peeces of hanginges wth flowers and leaves, ould.

ix*li*.

Item, a standing bedsteed of Walnuttree wth a testar and curtaines of
scarlett, all laide downe wth ould gold lace, a bed of downe of fustian, a mattres,
a linnen quilte, a fustian blanckett, a white rugg, a counterpointe of stammell,³
twoe pillowes, a greene velvett Chaire, old, a chaire of Crimson wrought
velvett, ould, one old square stoole of stammell. } xij*li*.

Item, a square table of Walnuttree, a courte Cupbord of wainscot.

vjs.

Item, twoe old windowe Carpettes of turquoy stuffe, one Carpett of
greene wrought velvett, past service. } xiijs. iiij*d*.

Item, a fetherbed and boulder, ij course blanckettes, a tawney rugg.

xxxiijs. iiij*d*.

Summa xxij*li*. xijs. viijs.

The Vtter Chamber to that.

Item, a cubbord of Walnuttree, a back stoole of lether, a fire shovell,
a paire of crepers.⁴ } viijs.

Summa patet.

The Chappell Clossett.

Item, a foote turquoy Carpett, a windowe Carpett of turquoy stuffe, iiij^{or}
lowe stooles covered wth Crimson velvett, ould, an ould tapestrie Cushin. } iij*li*.

In the Chappell.

Item, twoe turquoy carpettes, one large, one small, one verge⁵ ould cushin
of needle worke. } xls.

Item, a fether bed, a bolster, a course blanckett, a course counterpoynte of
vardures,⁶ an old standerd. } xls.

Summa iij*li*.

¹ A traverse or curtain to draw across the room.

² Cotgrave's Dictionary under 'Baguette' gives as one sense of the French word 'also the sleight cloth Pennistone'; pennistone was a coarse woollen fabric.

³ Fine worsted.

⁴ Small 'dogs' to place between the andirons.

⁵ Tapestry ornamented with representation of trees, &c.

⁶ Green.

The gentlewomens Chamber.

Item, v peeces of very ould hanginges of Imagerye.	vj <i>li</i> . xiijs. iiij <i>d</i> .
Item, a fetherbed, a boulster, iij blanckettes, one Coverlett of ould branckettes, ¹ twoe downe pillowes.	} iij <i>li</i> .
Item, ij Coffers, a truncke, a square table of Walnutt tree, a little paire of lowe Andirons.	
Summa xj <i>li</i> .	xxvjs. viij <i>d</i> .

My Ladyes Chamber.

Item, eight peeces of hanginges, ould.	xx <i>li</i> .	
Item, a standinge bedsteed of Wallnutt tree, the tester and curtaines skarlett, laide downe w th silver and gold lace, a chaire and a square stoole suteable, a small Carpett of crimson figured satten, one downe bed and bolster, iij linnen quiltes, one fustian blanckett, iij Wollen blanckettes, ij pillowes, a counterpoynte suteable to the bed.	} xxv <i>li</i> .	f. 5.
Item, six small Windowe turquoy carpettes.		
Item, a little fouldinge table, an old cupbord, a back Chaire of crimson velvett.	} vs.	
Item, a fetherbed, a bolster, twoe blanckettes, iij pillowes, a counterpointe of slite ² turquoy stuffe.		
Item, a picture w th an ould man looking in a booke, w th a woman w th him. ³	ijjs.	
Item, a paire of latten Aundirons, lowe, a paire of tonges, a skrene.	vjs. viij <i>d</i> .	
Item, iiij ^{or} Coffers, wherof twoe small.	xxvjs. viij <i>d</i> .	
Summa lj <i>li</i> . iiijjs. iiij <i>d</i> .		

In the Wthdrawing Chamber next.

Item, vj peeces of hanginges, ould.	xiiij <i>li</i> . vjs. viij <i>d</i> .
Item, a Couche bedsteed w th a bed of old grene damaske.	xxs.
Item, one chaire, one back stoole, a lowe stoole, a foote stoole, v longe Cushions, iiij square Cushions, all of blacke and purple figured satten and made of an old gowne of my Ladyes.	} iij <i>li</i> . vjs. viij <i>d</i> .
Item, twoe chaires, a backe stoole, ij square stooles of blacke velvett, all ould, v high stooles of crimson velvett, ould.	
Item, v turquoy Windowe Carpettes.	xxs.
Item, a paire of copper Aundirons, fire shovell, a forke.	xiijs. iiij <i>d</i> .
Item, a square table, a courte cubbord, a skreene.	xs.
Item, a picture of Diana. ⁴	vs.
Item, a cofer.	xiijs. iiij <i>d</i> .
Summa xxj <i>li</i> . xvs.	

¹ Some fabric of unknown character; no doubt the same as 'brankhige' on p. 37, below; in both instances it is used for a coverlet or counterpoint. Counterpoints of 'plaine brankage' appear in the Kenilworth Inventory (*MSS. of Lord De L'Isle and Dudley*, i, 297).

² i.e. slight or thin.

³ Elsewhere called 'An old man looking on his booke and a Ladye by him entysing him from it, in a frame of wood'. *Notes and Queries*, 3rd ser., ii, 224.

⁴ 'Diana bathyng herselfe with hir Nymphes.' *Notes and Queries*, 3rd ser., ii, 225.

The Earl of Essex Wthdrawing Chamber.

Item, v peeces of hanginges.	xj <i>li</i> .	
Item a feild bedsteed gilded, the tester and curtaines of murrey clothe of gould, a counterpointe of murrey satten, embrodered w th golde, a bed of downe, a boulder, a mattres, a linnen quilte, twoe fustians, one pillowe, twoe wollen blanckettes, a chaire suteable to the same bed.	xl <i>li</i> .	
Item, a demi foote turquoy Carpett.	xxxs.	f. 6.
Item, a windowe turquoy Carpett very ould.	ij <i>s</i> . vj <i>d</i> .	
Item, a chaire of crimson figured sattin, very ould.	vs.	
A paynted table.	xxs.	
Item, a paire of lattin Aundirons.	xs.	
Summa liij <i>li</i> . vijs. vj <i>d</i> .		

In the L. of Essex bed Chamber.

Item, v peeces of hanginges, ould, of Image.	ix <i>li</i> .	
Item, a feilde bedsteede of Wallnuttree, the tester and curtaines of chaungeable ¹ silke billeted, ² a bed of downe, a boulder, a mattres, a quilte, a fustian blanquette, twoe wollen banckettes, twoe pillowes, a quilte of crimson taffetie, ould and stayned.	x <i>li</i> .	
Item, twoe very ould turquoy carpettes, little, and one little carpett of crimson velvett.	xs.	
Item, twoe Venice chestes.	xxs.	
Item, a cupbord of wallnuttree, a very little table of wainscott.	vjs.	
Item, an old chaire embr[odered].	ij <i>s</i> . iiij <i>d</i> .	
Item, a close stoole w th a pann.	ij <i>s</i> . iiij <i>d</i> .	
Summa xxj <i>li</i> . ij <i>s</i> . viij <i>d</i> .		

An Vtter Chamber to the Same.

Item, a fetherbed & bolster, one mattres, ij blanckettes, one course counterpoynte.	xxxij <i>s</i> . iiij <i>d</i> .	
Item, a courte cupbord, old.	ij <i>s</i> .	
Summa xxxvs. iiij <i>d</i> .		

The Embroderers prentise.

Item, a Livery bedsteed, a bed and a boulder, ij course blanketts, one old counterpoynte, one horse clothe, three very ould stooles covered with grene clothe, one joyned stoole.	x <i>ls</i> .	
Summa patet.		

Mr Sandes Chamber.

Item, a liverye Bedsteed, a bed, a boulder, a mattres, an ould Linnen quilte and wollen blankett, one old greene quilte of grene moccado, one very ould tawney rugg, a pillow, a very ould half canapie of slight turquoy stuffe, three horse clothes and xxj horse hoodes.	ij <i>li</i> . vjs. viij <i>d</i> .	
Item, an old small turquoy carpett and one old Cushion.	vjs.	
Item, a Venice Cheste, ould.	xs.	
Summa iiij <i>li</i> . ij <i>s</i> . viij <i>d</i> .		

¹ Variegated.² Ornamented with heraldic 'billets'.

In his Inner Chamber.

Item, a featherbed, a boulster, one course blankett, a horse clothe, an old counterpoynte of Vardur, a little fouldinge table. } xxs.

Summa patet.

S^r ffrauncis Knowles¹ Chamber.

Item, a feilde bedsteed, playne, the tester and curtaines of turquoy stuff slight, a fetherbed, a boulster, twoo blancketts, ould, one old greene quilte of sarcenet. } iiij*l*. xs. f. 7.

Item, a fetherbed and a boulster, twoo wollen blanketts, a counterpoynt of wollen Imagerye, a quilte of greene mockado, an ould crimson velvett chaire past service, one joyned stoole. } xls.

Summa vj*l*. xs.

The La. Shaundos² Chamber.

Item, v peeces of ould hanginges. x*l*.

Item, a standing bedsteed of wallnut tree, the furniture and curtaines of stamell,³ a fetherbed, a bolster, one mattres, one old linnen quilte past service, one wollen blankett, one crimson quilte of sarcenet, stayned, twoe pillowes. } viij*l*.

Item, twoe chaires, ould, one of white taffetie embrodered with tawney velvett, the other of blacke velvett, twoe old stooles covered with greene. } xjs.

Item, one little ould square table, a courte cupbord, an old turquoy carpett, worne. } xiiijjs.

Item, a paire of creepers and a fire shovell. ijs.

Summa xix*l*. vijs.

In the lowe Gallerie.

Item, xij ould guilte leather hanginges. iiij*l*.

Item, vj foulding chaires, trimmed wth crimson velvett, very ould. } iiij*l*.

Item, vj square stooles, suteable, one very ould chaire covered wth leather. } xxs.

Item, a sweete wood⁴ table standing vppon fower beares, twoe ould joyned stooles. } xxvjs. viij*d*.

Item, a paire of latten andirons embossed. ijs.

Item, a verie ould mappe in a frame.

Summa viij*l*. viijs. viij*d*.

In the banquetting house.

Item, a rounde table of Walnuttree vppon a frame, a courte cupbord of Walnuttree. } xxs.

Summa patet.

¹ Sir Francis Knowles or Knollys was father of the Countess of Leicester.

² Dorothy, widow of the 2nd Lord Chandos (*d.* 1573), who had married William Knowles, second son of Sir Francis Knowles.

³ Fine worsted.

⁴ See p. 25 above.

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Item, a square table layd in wth marbell stone, standing vppon a frame, } _{xxx.}
broke and defaced, an ould forme of wainscott.

A Livery bedsteed, a bed, a boulster, ij blanckettes, j old counterpoynte. xxs.
Summa patet.

f. 8.

xxxvli.

xxxiiij^{li}. vjs.
viij^d.

vjs. viij*d*.

xxvjs. viij*d.*

vjs. viij*d*.

• iiij*li.*

• iiiij*li*.

xlvijs. viiij*d*.

xiijs. iiij*d*.

In his Closett.

vjli. xiijs. iiijd.

xls.

vjs.

xls.

The Dining Chamber next the Lord of Warwicke.

XXXS.

xiijs. iiij*d*.

iiij*li.* vjs. viiij*d.*

² Compare the description on p. 49.

⁴ A keyed musical instrument, similar to a spinet, but set in a case without legs. See 'harpe virginalls' and 'organ virginal' on pp. 36, 46.

Item, six highe ould joyned stooles.	iijs.
Item, a mappe of the worlde.	iijs. iiij <i>d</i> .
Item, a paire of Imbost Andirons.	xxvjs. viij <i>d</i> .
Item, iiij ^{or} peeces of old hanginges of forrest worke.	xli.
Summa xvij <i>li</i> . iijs.	

In the greate Chamber next the Garden.

f. 9.

Item, iiij ^{or} peeces of old hanginges of the stoyre of Moyses founde in a baskett.	xij <i>li</i> .
Item, three ould stooles covered with greene clothe, five very ould chaires covered w th leather, three very ould blacke stooles covered w th leather.	xiijs. iiij <i>d</i> .
Item, a paire of Imbossed Andirons.	xxvjs. viij <i>d</i> .
Item, a greate Instrument made like a Wainscott cupbord, all broken.	xls.
Item, two paire of ould harpe virginalls.	xxvjs. viij <i>d</i> .
Item, an ould plancke table vppon tressells.	iijs. iiij <i>d</i> .
Item, a square fouldinge table with a frame.	iijs.
Summa xvij <i>li</i> . xiijs.	

In the Clossett next the
Ladye Shaundos Chamber.

Item, twoe hundred and twentie bookes, great and small.	xli.
Summa patet.	

The Clarcke of the Kitchens Chamber.

Item, iiij ^{or} peeces of very ould hanginges.	vli.
Item, a feild bedsted, the tester and curtaines of slight turquoy stuffe, a fetherbed, a bolster, a paire of blancketts, a white rugg, a mockado redd quilte, a pillowe of doune.	vli.
Item, a pallett bedd and bolster, a mattress, a course wollen blanckett, a course counterpoynte of woollen Imagerye.	xxxs.
Item, a leather chaire, a wooden chaire, twoe old tables, one joyned stoole.	vs.
Summa xj <i>li</i> . xvs.	

The Yeoman of the Sellers Chamber.

Item, a Livery Bedsted, a feather-bedd, a bolster, a mattres, a woollen blanckett, a white rugg, a very old canapie of grene saxe. ¹	xlvijs. viij <i>d</i> .
Summa patet.	

Mr. Martins Chamber.

Item, a counterbord, ² a small square table, a close stoole, all ould.	iijs. iiij <i>d</i> .
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Wm. Brabyes Chamber.

Item, a liverye bedsted, a featherbed, a bolster, a mattres, twoe woollen blanckettes, a rugg of blewe and yellowe, a horse cloth, twoe hoodes, a pillowe, one joyned stoole.	iiij <i>li</i> .
Summa patet.	

The next Chamber.

Item, twoe liverye bedsteeds.	[No entry.]
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¹ A fine serge.² A counting-board.

AND EXETER INN

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The third Chamber.

Item, a liverye bedsteed, a bed, a bolster, ij blanketts, a white rugg. xxxs.
Summa patet.

The Kitchin Chamber.

The furniture there. vjs. viij*d*.
Summa patet. f. 10.

Mr. Lawrences Chamber.

Item, a Liverye bedsteed, a bed, a bolster, a mattres, a woollen blannett, }
a counterpoynte of Brankhige,¹ a verie ould chaire past service wth a cushion of } ls.
vardures, a courte cupbord, a plancke forme, a stoole. }
Summa patet.

Yeoman Ushers.

Item, a livery bedsteed, a bed, a bolster, ij blanketts, a blewe rugg, an }
old pillowe. } xls.
Summa patet.

The Hall.

Item, an olde longe table standing vpon tressells, ij longe plancke formes, }
a shorte plancke table, without tressells, a square table vpon a forme, a shorte } vjs.
forme. }
Summa patet.

Pantry.

Item, xij pewter candlestickes, very ould. Item, ij blanck bordes, a forme, }
a stoole, an old bin, three little old shelves. } iijs. viij*d*.
Summa patet.

Larder.

Item, one table, a forme, twoe old chestes of bord, three duple chestes, }
three ould tubbes. } vjs. viij*d*.
Summa patet.

Kitchen.

Item, a paire of great rackes, a paire of lesser rackes of iron, spittes of all }
sortes xxvij, gredirons of all sortes vij, three frying pannes, a grate for the fire, } xls. viij*d*.
vij very ould dripping pannes. }
Item, vj ould pottes, some broken, twoe posnetts.² xxxs.
Item, one greate deepe pott of brasse. xiijs. iiij*d*.
Item, v pannes and kettles wth a boyling panne. iij*d*.
Item, a paire of feild rackes, three peales.³ vs.
Summa vij*d*. ix*s*.

¹ Some fabric of unknown character ; no doubt the same as 'brannettes' on p. 32 above.

² Small pots.

³ Or 'peels', long-handled shovels for taking bread, &c., out of the oven.

Mr. Atise Chamber.

Item, v peeces of ould hanginges.	viiij <i>li</i> .
Item, a fetherbed, a bolster, a white rugg very ould, and iiij ^{or} joyned } stooles.	xls.
Item, ij turquoy carpetts, one quite past service.	iijs. iiij <i>d</i> .
Summa x <i>li</i> . iijs. iiij <i>d</i> .	

Porters Lodge.

f. 11.

Three livery Bedsteedes, three bedds, ij bolsters, ij blanketts, ij counter- poyntes, one of wollen imagerie, one of vardures, a horse cloth, an old forme. }	iiij <i>li</i> .
Summa patet.	

In the half pace¹ before the greate chamber dore.

Item, iiij ^{or} Courte cupbordes, a standard, a truncke.	xjs.
Summa patet.	

In the Wardrobe.

Item, vij fetherbeddes, viij boulsters, and ix mattresses, old; xvij woollen blanketts, course and ould; ij ould course rugges, one white, one greene; a quilde of red mockado, old; vj ould counterpoyntes of vardures. }	xiiij <i>li</i> . vjs. viij <i>d</i> .
Item, ij doune bedds, ij doune bolsters, ij linnen quiltes, old, ij pillowes of doune, vj fustian blanketts, ould. }	x <i>li</i> .
Item, tenne old cushions of vardures.	xxiijs.
Item, xij old cushins of greene cloth.	xvs.
Item, v close stooles w th pannes covered with leather.	xxs.
Item, three close stooles covered w th crimson velvett, very ould.	xviijs.
Item, an old truncke w th a feild bedsteed w th tester and curtaines of yellowe damaske in it, a counterpoynte suteable w th a case of leather. }	x <i>li</i> .
Item, ij high stooles covered w th crimson velvett, an old long cushion of crimson velvett. }	xiijs. iiij <i>d</i> .
Item, twoe old forckes for fire and a fire shovell, ij old par of tonges.	iijs. iiij <i>d</i> .
Item, a large Persian carpett.	x <i>li</i> .
Item, three large turquoy old carpetts, ij demy old turquoy carpetts.	x <i>li</i> .
Item, vij verie ould windowe carpetts small.	xxiijs.
Item, an old turquoy carpett large.	vj <i>li</i> .
Item, ij peeces of fyne hanginges w th my Lordes Armes.	xv <i>li</i> .
Item, viij peeces of newe hanginges unlined.	xxxviiij <i>li</i> .
Item, viij peeces of hanginges, quarter lined. }	xxxiiij <i>li</i> . vjs. viiij <i>d</i> .
Item, tenne shallowe old peeces of hanginges of severall sortes.	vj <i>li</i> . vjs. viij <i>d</i> .
Item, an ould standing bedsteed painted, the tester and vallaunce ould of clothe tissue and cloth of silver, the curtaines of yellowe and white taffetie, the quilde ould, much worne, past service, suteable, an old chaire torne, a longe cushin suteable to the bed with the Lennox armes. }	vj <i>li</i> . xiijs. iiij <i>d</i> .
Item, an old feild bedsteed of wallnutt tree w th the tester and vallaunce of murry and purple figured satten w th the counterpaynes of murrey and purple damaske, an (<i>sic</i>) chaire and a longe cushin, ould, suteable to the bedd, a counter- poynte of chaungeable taffetie, suteable. }	xiiij <i>li</i> . vjs. viij <i>d</i> .

¹ Raised platform.

Item, a slope Bedstead of Wallnuttree, the tester and curtaines of skarlett laid out w th a small gold lace, a chaire suteable, a counterpoynt of scarlett suteable.	xij <i>li</i> . vjs. viij <i>d</i> .	
Item, a feild bedstead of Wallnuttree, the tester and curtaines of slight turquoy stuffe, a counterpoynte suteable.	ij <i>li</i> .	
Item, a slope bedstead of Wallnuttree, the tester and curtaines of frost vppon grene clothe, a counterpoynte suteable.	xxij <i>js</i> . viij <i>d</i> .	f. 12.
Item, a square table carpett of turquoy stuffe.	xxx <i>s</i> .	
Item, a chaire, a longe cushion, a lowe stoole, very ould, of silke needle worke, very ould.	xxx <i>s</i> .	
Item, a little rounde table of sweete wood. ¹	xij <i>d</i> .	
Item, a skrene of paynted Buckerame, ould, layd aboute with a gold lace.	vs.	
Item, one greate chaire, a lowe chaire, xij highe stooles, ij lowe stooles, one foote stoole, one large carpett, one cupbord clothe of Oring coler velvett embrodered w th borders of needleworke, twoe longe cushions, three square cushions suteable.	xxx <i>li</i> .	
Item, the robe of Saint Michaells Order.	xxvj <i>li</i> . xij <i>js</i> . iiij <i>d</i> .	
Item, twoe ould robes of the garter and a kirtle w th there furniture.	vij <i>li</i> .	
Item, one robe of crimson velvett, furred thourough with minever and a kirtle suteable lyned thorough with white taffetie, with a hooode.	xvj <i>li</i> .	
Item, a robe of skarlett lyned thorough w th white taffetie sarcenet and white minever vppon it, with a hood to it, a kirtle of skarlett to the same vnlined.	v <i>li</i> .	
Item, a cloth of estate of tissue, a chaire and stole and cushion suteable.	x <i>li</i> .	
Item, a cloth of estate of blacke ould velvett embrodered with ragged staves, a chaire, a longe cushion, a lowe stoole, a foote stoole, suteable.	v <i>li</i> .	
Item, a tester, very ould, of crimson figured satten, w th curtaines very old of crimson damaske.	x <i>ls</i> .	
Item, a seler tester of purple velvett w th iiij ^{or} peeces of vallaunce to the same, embrodered w th cloth of gold.	xxx <i>li</i> .	
Item, a canapie of purple velvett with the curtaines of purple Taffetie laid on with silver lace.	vij <i>li</i> .	
Item, an old canapie of white taffetie embrodered with tawney velvett, the curtaines of tawney taffetie, a quilte suteable.	v <i>li</i> .	
Item, a half canapie of crimson velvett, ould, embrodered w th gold, the curtaines of crimson taffetie, an old carpett suteable, lined, torn.	vj <i>li</i> .	
Item, a carpett of greene velvett, embrodered with satten of sundry coulors and ragged staves.	ij <i>li</i> . vjs. viij <i>d</i> .	
Item, a skreen cloth of greene velvett, laid on with a litle parchment lace of gould.	liij <i>js</i> . iiij <i>d</i> .	f. 13.
Item, an old carpett of darke tawney velvett, embrodered aboute with a slight border of copper, gold, and silver.	x <i>ls</i> .	
Item, a shorte carpett of stripte satten crimson stripe w th gold.	ls.	
Item, a shorte carpett of Oringe tawney velvett, embrodered with silke needleworke.	x <i>ls</i> .	
Item, a shorte carpett of greene velvett trimd w th a silver lace aboute and fringe w th silver and gold.	xliij <i>js</i> . iiij <i>d</i> .	

¹ See p. 25 above.

Item, a shorte old carpett of crimson velvett laid aboute with a gold lace and fringed w th gold.	xxxiijs. iiij <i>d</i> .
Item, a shorte old carpett of blewe velvett trimmed with a golde lace.	xxvjs. viij <i>d</i> .
Item, a carpett of old stamell, ¹ square.	xvijs.
Item, a shorte carpett of wrought crimson velvett, fringed with blewe silke and gould.	xls.
Item, a longe ould carpett of greene velvett, embrodered aboute with a border of ragged staves and buttons, a shorte carpett suteable.	vij <i>li</i> .
Item, a square carpett of tawney velvett embrodered aboute w th a border aboute of sundry coloured silkes.	xxxiijs. iiij <i>d</i> .
Item, a half canapie for a cradle of crimson velvett, the traines of crimson taffetie.	xxs.
Item, an old lowe chaire and longe cushin suteable.	xxs.
Item, a little chaire for a childe, of carnation and greene clothe and tinsell, with a cradell.	xxs.
Item, an old backe lowe chaire of crimson velvett.	xs.
Item, a chaire, a square stoole, a lowe stoole, a longe cushion, a square cushion of purple velvett, richely embrodered w th gould and silver.	x <i>li</i> .
Item, a chaire, a square stoole, a foote stoole, a longe cushin of silke needleworke gould and silver.	v <i>li</i> .
Item, a chaire, a longe cushin of silk needleworke billeted. ²	xls.
Item, twoe lowe stooles with needleworke of sundry colours with roses, ould.	xiijs. iiij <i>d</i> .
Item, a high stoole covered with needleworke.	vjs. viij <i>d</i> .
Item, a peece of turquoy stuffe.	xls.
Item, an ould quilte of chaungeable taffetie.	xxxxs.
Item, a quilte of crimson silke of one side and greene on the other side, staned, very ould.	xxxxs.
Item, a quilte of yeallowe turquoy stuffe, very old and staned.	xiijs. iiij <i>d</i> .
Item, one other of Watchett ³ satten, old and stayned.	xxxxs.
Item, a turquoy quilte of crimson and yellow, ould and stayned.	xls.
Item, an other of the like stuffe, stayned.	ls.
Item, an other of Watchett taffetie, stayned.	xxs.
Item, a square carpett of tinsell of sundry colours.	xls.
Item, five longe cushins vnmade vpp and lined w th leather, wherof ij of blacke velvett and three of sattin embrodered w th gold and silver.	v <i>li</i> .
Item, three ould longe cushions of crimson velvett much worne.	xxs.
Item, xij long cushions of sattin of sundry colours, embrodered with gould and silver.	xiiij <i>li</i> . vjs. viij <i>d</i> .
Item, iiij ^{or} longe cushions of frenche needleworke.	iiij <i>li</i> .
Item, vij longe cushions of needleworke of sundry colours wherof iiij ^{or} some with gold.	iiij <i>li</i> .
Item, three longe old cushins of Arrace, and some gold, one other longe cushin of pettie point stitche.	xls.
Item, one longe cushin of purple velvett embrodered.	xxxxs.
Item, three longe cushions, twoe embrodered, the other of cloth of gold, ould.	xxxxs.

¹ Fine worsted.³ Pale blue.² Ornamented with heraldic 'billets'.

Item, three longe cushions of clothe of gould, verye ould.	xls.
Item, sixe square cushions of needleworke, ould.	xxxxs.
Item, ij longe turquoy carpettes.	xiiij <i>li</i> . vjs. viij <i>d</i> .
Item, iij Percian square carpettes.	vij <i>li</i> .
Item, an old turquoy carpett.	viijs.
Item, three greate glasses, one standing in a verie faire frame, with beares	} xls.
and ragged staves on the top, with a steele glasse ¹ in it, the other ij of cristall.	
Item, an ould bearing canapie with certaine Joyntes of silver, of greene	} xiijs. iiij <i>d</i> .
taffetie.	
Item, xvij mapps.	xxs.
Item, xl pictures one with an other.	iiij <i>li</i> . vjs. viij <i>d</i> .
Item, viij table painted pictures.	xxxxs.
Item, a Venice cheste gilte.	xs.
Summa CCCClxix <i>li</i> . xvjs. viij <i>d</i> .	

Apparrell.

Item, iiij ^{or} Doublettes of sattin embrothered with gold and silver, with	} xxiiij <i>li</i> .	
hose to them, old and worne.		
Item, iiij ^{or} dublettes of sattin laid on w th gold and silver lace, iiij ^{or} paire of	} x <i>li</i> .	
hose suteable.		
Item, vij dublettes of sattin and laced, w th iiij ^{or} paires of hose.	} xj <i>li</i> .	
Item, vij dublettes, wherof iij plaine sattin Dublettes, iiij ^{or} more of taffetie		
and fustian.	} iiij <i>li</i> . xs.	f. 15.
Item, iij dublettes of leather, and hose of leather laid on w th silver twist.		
Item, two privie dublettes covered with sattin.	vj <i>li</i> .	
Item, twoe Jerkins of buffe laid on with silver and gold lace.	v <i>li</i> .	
Item, one dublett of buffe, laid on checkerwise.	viiij <i>li</i> .	
Summa lxxiiij <i>li</i> . xs.	viiij <i>li</i> .	

At Wansted.

[Various articles of furniture, tapestry, cushions, &c. Summa Cxvj*li*. xvjs. viij*d*. Perhaps entered here, as properly belonging to Leicester House.]

Cloakes.

Item, a Dutche cloake of blacke velvett, richly embrodered, lined with	} xx <i>li</i> .	
stripte cloth of gold.		
Item, a shorte cloake of blacke sattin embrodered w th golde without	} iiij <i>li</i> . vjs. viij <i>d</i> .	
lininge.		
Item, a Dutche cloke of blacke velvett embrodered w th sattin.	} vj <i>li</i> . xiijs. iiij <i>d</i> .	
Item, a Dutche cloake of blacke velvett laid on w th a sattin lace.		
Item, an old Dutch cloke of sattin, w th small gardes ² of velvett.	} vj <i>li</i> . xiijs. iiij <i>d</i> .	
Item, a Dutche cloake of blacke sattin trimd w th two gardes of black		
velvett.	} liijs. iiij <i>d</i> .	
Item, a Dutche cloake of taffetie trimd w th blacke lace and with velvett.		
Item, a sattin cloake, lined w th velvett, the sattin laced all over.	iiij <i>li</i> . xs.	f. 16.
	v <i>li</i> .	

[Sixteen other cloaks follow.]

Item, a Dutche cloake of sattin trimmed w th lace, faced w th Luzarns. ³	xv <i>li</i> .
Item, a blacke velvett cloake furred w th sables, old.	xviiij <i>li</i> .

¹ A polished steel mirror.
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² Facings.
G

³ Or lucern, lynx-fur.

Item, a Dutche cloake of satten furred with silver heare. Cunnyes¹ } vj*li*. vjs. viij*d*.
 garded with velvett.
 Summa Clvj*li*.

Gownes.

In primis, a longe gowne of wrought velvett laid aboute with a gold lace, } xv*li*.
 faced wth sables.
 Item, a longe gowne of blacke velvett faced wth silver beare, coller cunnye } x*li*.
 and fured wth cunnye.
 Item, an ould night gowne of tuff taffetie² furd wth ffox. v*li*.
 Item an old sattin gowne. v*li*.
 Item, a longe damaske gowne laid aboute wth a Gould lace, vnlined. v*li*.
 Summa xl*li*.

Cassocks.

Item, a cassocke of figured sattin trimd wth a silver lace, twoe other of } viij*li*.
 taffetie, ould, one other of damaske laid on wth lace, ould.
 Item, iij cassockes, one of frize and ij of clothe. vj*li*.
 Summa xiiij*li*.

Hattes and Capps.

Item, tenne velvett capps and capp hattes. iij*li*. vjs. viij*d*.
 Item, five ould taffetie hattes, sixe beaver hattes. xls.
 Item, one thrum³ hatt. xs.
 Item, xij par of topps of bootehose, laid on with gold and silver lace. iij*li*.
 Summa viij*li*. xvjs. viij*d*.

f. 17.

Rapiers and daggers.

Item, xij rapiers and daggers gilte, v damasked, ould and broken. vj*li*. xiijs. iiij*d*.
 Item five hangers, twoe daggers. xls.
 Item, iij Scottishe blades. xxs.
 Item, v ould standerdes. xxvs.
 Item, xiiij verie old saddles. xxs.
 Summa xi*li*. xviijs. iiij*d*.

In M^r Hindes Chamber.

Item, a verie ould foote clothe of purple velvett, embrodered wth gold, } v*li*.
 past service, challenged for a fee at my L. ffunerall.
 Item, a foote clothe, very ould, of blacke velvett embrodered wth cloth of } liijs. iiij*d*.
 Gould.
 Item, a side sadle clothe of blacke velvet. Item, a verie ould foote cloth }
 of blacke velvett embrodered wth broade laces of silver and gold, challenged for } —⁴
 ffees.
 Item, a saddle of purple velvett wth Coparisons wth all furniture apperteyn- } vj*li*. xiijs. iiij*d*.
 ing, embrodered all over, very ould.

¹ Rabbit skin.³ Coarse woollen.² Or 'tuft taffeta', i. e. taffeta with a pile or nap in tufts.⁴ No value given.

Item, a saddle of crinsom w th the Coparisons and all furniture belonginge,	} viij <i>li.</i> vjs. viij <i>d.</i>
the backe and pomell plated w th silver and gilte, ould.	
Item, a saddle of black velvett embrodered all over w th gold, with all furniture belonginge, olde, with Coparisons.	} — 1
Item, a saddle of blacke velvett, slight, embrodered w th gold, w ^{thout} Coparisons.	
Item, a featherbed, a boulster, a blankett.	xxs.
Item, ij peeces of hanginges.	xls.
Summa, xxxv <i>li.</i> xiijs. iiij <i>d.</i> ²	

Armor.

Item, xlj graven Corslettes w th Vambraces, ³ at xxvjs. the peece.	lj <i>li.</i> vs. ⁴
Item, tenne paire of graven Curates ⁵ w th gorgettes, poulderons, ⁶ pipes and murrions, at xvjs. the peece.	} vij <i>li.</i> xs. ⁴
Item, sixe graven targettes, readye trimmed.	
Item, one targett plate.	iiij <i>li.</i>
Item, iiij ^{or} graven Curates w th Collers.	vjs.
Item, iiij Corslettes plaine white and blacke.	liijs. iiij <i>d.</i>
Item, iiij sanguined Corslettes furnished.	iiij <i>li.</i> iijs.
Item, xlvj white Curates for foote men.	xlvijs.
Item, xxxvij blacke brestes for foote men, collers, murrions and laces, at tenne shillinges the peece.	xxvj <i>li.</i>
Item, twoe hundred nynetie one graven Murrions, at iijs. the peece.	} xviiij <i>li.</i> xs. f. 18.
Item, one blacke Armor for a horseman.	
Item, nyne half Corslettes, w ^{thout} Murrions, at vjs. viij <i>d.</i> the peece.	xxxviiij <i>li.</i> xiijs.
Item, xvj commen Murrions.	xls.
Item, viij blacke burgenettes. ⁷	liijs. iiij <i>d.</i>
Item, xxvij plaine muskettes w th flaskes.	xvjs.
Item, an old muffle ⁸ Armor, past service.	viijs.
Item, iiij C. Calivers ⁹ at iijs. the peece.	xviiij <i>li.</i> xs.
Item, three case of Pistolles.	—
Item, fforty nyne Muskettes.	lx <i>li.</i>
Item, xxj plaine horne flaskes and longe boxes.	xls.
Item, xxij faire Calivers, without flaskes.	xxxvj <i>li.</i> vs.
Item, fiftie plaine Calivers w th fiftie flaskes.	liijs. iiij <i>d.</i>
Item, three petronelles ¹⁰ parcell guilte.	xj <i>li.</i>
Item, a faire targett graven and gilte, of prooffe.	xxvj <i>li.</i>
Item, iiij holberds.	xls.
Item, a leading staffe.	xls.
Item, forty blacke Curates w th collors and murrions.	xxvjs. viij <i>d.</i>
Item, xxx ^{tie} partisans.	xs.
Item, 442 blacke billes at viij <i>d.</i> the peece.	} xxvj <i>li.</i> viijs.
Item, viij old holberds.	
	iiij <i>d.</i>
	vj <i>li.</i>
	xv <i>li.</i>
	xxs.

¹ No value given.² Apparently 5*l.* was allowed for the unpriced items.³ For the front of the arm.⁴ *Sic* in original; there are obvious errors of copying in this section.⁵ Cuirasses; a commonly used form 1560-1650.⁶ Shoulder-plates.⁷ Burgonets, or light steel casques.⁸ Perhaps 'muffled'; but the meaning is obscure.⁹ Light muskets, the lightest portable fire-arms.¹⁰ Horse-pistols.

Item, two hundred fourscore bowes and arrowes.

{ xviiij*li*. xiijs.
 iii*d*.

Item, a compleate Armor graven and gilte.

xxv*li*.

Item, a playne white compleate Armor parte gilte.

xx*li*.

Item, a plaine blacke Armor, onely for the Bodye.

iiij*li*. vjs. viij*d*.

Summa CCCCxxxvj*li*.

In the Kitchen.

Item, Chargers iiij^{or}, Platters xiiij, Dishes xv, lesser viij, lesser then those } liijs. iiij*d*.
vij, lest of all ix, pye plates iiij^{or}, sawcers vij.

Summa patet.

In the Larder.

Platters xij, platters of a lesser sorte xxiiij, greate Dishes xxiiij, small } iiij*li*. vjs. viij*d*.
Dishes xij, Dishes of a thred sorte vj, sawcers xj, pye plates vij.

Summa patet.

At Wansted.

Item, ffour course blankettes.

xs.

Item, one wollen bedd and bolster.

liijs.

Item, one close stoole of crimson velvett.

vjs. viij*d*.

f. 19.

Item, one dininge table of Sweete wood.¹

—

Item, ij fouldinge square tables of Walnuttree wth frames, one other } xiijs. iiij*d*.
square table.

Item, one greate fire shovell.

xx*d*.

Item, a chaire of cloth of tissue, ould.

xxxs.

Item, an ould flatt standerd, a chest of wood for Instrumentes.

xiijs. iiij*d*.

Item, five fine lanterns.

—

Item, a bonehade.²

xiijs. iiij*d*.

Item, an ould broken dutche Chaire.

—

Summa iiij*li*. xijs. iiij*d*.

Lynnen.³

Damask table and cupbard clothes, towels, diaper cloths, napkins, holland cloths, sheets and pillowberes.

Summa xxviiij*li*. xij*d*.

Naperye.

Table cloths—17—one 9 yards long and three yards wide; towells 15; napkins 14.

f. 20.

Summa xxviiij*li*. xixs. viij*d*.

Damaske.

Table cloths, 12; cupboard cloths, 12; towells, 30; 'four arminge towelles,⁴ of plaine holland, liijs.'; 'two coverpaines fringed with gold and silver of damaske, yarde di. longe a peece and yarde broad'; & 6 dozen and eight damask napkins.

Summa xlv*li*. vs. viij*d*.

¹ See p. 25 above.

² The meaning is obscure; there may be some error of the copyist.

³ This and the next three heads are summarized.

⁴ Perhaps pads or some sort of appliances worn under armour.

Diaper.

Table cloths, cupboard cloths; towels, 'three plaine ould arminge towelles', with other pieces of diaper, sheets, (6 pairs of Cambric) pillowberes, cushion cloths, coverpanes. f. 21.

Summa Clxxxv*li*. iijs. viij*d*.

Gilte Plate.

f. 22.

Item, a faire square gilte salte with fower antique pillers, wth a cristall piller in the middest. poiz. Cxxxij oz. di., the cover xliij ounces di., poiz. in all Clxxvij ounces.

Item, a little guilte salte wth two pillers of cristall and the poiz. xxij oz.

Item, twoe litle gilte bell saltes, poiz. xij. oz. iij quarters.

Item, a faire gilte salte with an aggett wth divers small stones and pearles, poiz. liij oz.

Item, twoe plaine gilte saltes, standing uppon rounde balles wth covers, poiz. liij oz. di.

Item, a salte of mother of pearle in fashion of a Swan, garnished with silver and priz. v*li*. xiijs. iiij*d*.

Item, a parcell gilte salte wth a cover poiz. tenne oz.

Item, a spice boxe in the forme of a beare gilte, poiz. lxij oz. di.

Item, a verie faire cristall glasse graved wth antiques, garnished wth golde, iij*li*. vjs. viij*d*.

Item, twoe Jugges garnished with silver and gilte. viij*li*.

Item, a high cupp of an Estridges eggshell crackt, garnished with [silver] and guilte viij*li*.

Item, a wooden ewer paynted, garnished with silver and guilte, broken and past service xls.

Item, twoe blewe glasse flaggons, broken, garnished wth silver and guilte. v*li*.

Item, two Castinge bottles¹ of silver and gilte, poiz. xvij oz.

Item, fower Carvinge knives and a forke, the handles silver and guilte. v*li*.

Summa, Cxliij*li*. xvjs. vd.²

Plaine Silver plate.

f. 23.

Item, a salte, shipp fashion, of a shell garnished wth silver, poiz. xxxij oz.

Item, five plaine saltes without covers, poiz. 90 ounces.

Item, fower plaine silver candlestickes, poiz. Cxxxvij oz.

Item, a silver bason and ewer, poiz. 99 oz.

Item, one other bason and ewer, poiz. lxij oz.

Item, an other bason and ewer, poiz. lxij oz.

Item, five cuppes wth eares of silver, poiz. Cxx oz.

Item, three plaine bowles and one cover, poiz. lxxij oz.

Item, a perfuminge panne, a dozen of spoones, a ladle and skimmer, poiz. liij oz.

Summa Clxxvij*li*. vijs. viij*d*. 734³ oz.

Gilte Plate.

Item, three gilte bowles wth a cover, poiz. liij oz.

Item, twoe suger boxes and twoe spoones gilte, poiz. lxix oz.

Item, a greate guilte bowle with a cover.

Item, a cupp of Assure.⁴

Item, foure longe cuppes, parcell gilte wth twoe covers, poiz. xliij oz.

¹ For sprinkling perfume.

² The total weight is entered as 413½ oz., the priced articles being excluded.

³ The weights are given also in Roman numerals in a separate column, where the weight of the second bason and ewer appears as 69 oz.

⁴ Lapis lazuli.

Item, five plaine silver bowles, wthout covers, poiz. 88 oz.

Item, twoe Tunnes, twoe silver cuppes with covers, one bowle, poiz. Cx oz.

Summa lxxxiiij^{li}. xs. iiij^d. 362 oz.

Silver Vessell.

Item, xxiiij platters of one sorte, poiz. CCCxxiiij oz.

Item, xxiiij plates of another sorte, poiz. CCCxxix oz.

Item, fower plates of another sorte, poiz. Clviiij oz.

Item, fower platters of another sorte, poiz. Cxlviiij oz. di.

Item, one greate Charger, poiz. 68 oz.

Item, six sawcers, poiz. xxxvij oz.

Item, xij small trencher plates, poiz. 81 oz.

Item, xxvj platters of another sorte, poiz. viij C. lxiiij oz.

Item, viij dishes of another sorte, poiz. CCiiij oz.

Item, vij small dishes of another sorte, poiz. Cxliij oz.

Item, lesser dishes, poiz. Clxxv oz.

Item, vj sallett¹ dishes, poiz. lxxj oz.

f. 24.

Summa vj C. xxvij^{li}. ixs. jd. 2600¹/₂ oz.

Memorandum that everie ounce of the white plate was valued by the prizers at iiij^s. xd. and everie ounce of guilte plate at vs. ij^d. the ounce.

Summa Totalis huius Inventorii MMM. Clxxxvij^{li}. xiiij^s. ij^d.

WANSTEAD.

Inventory taken on 8 Nov. 1588.

A Summary is given for comparison, with a note of some interesting items: contained on ff. 24-36.

In the Great Gallerye, 33^l. 6s. 8d. Clothe carpettes, 37^l. 6s.; chaires, 23^l. 5s. 6d.; stools and cushions, 37s. 5d.; Quilts, 9^l. 13s. 10d.; Mattresses 2^l.; Fustians, 2^l. 3s. 4d.; Pictures, f. 25. 14^l. 13s. 4d. — 'Three pictures, one of Kinge Henry the eight, and of Queene Marie, one of f. 26. her Mat^{ie}, iij^{li}. Tenne old longe pictures uppon clothe in frames of wainscott, iij^{li}. Three pictures, half proportion, one of my Ladie, Casimenir,² and the Ladie Riche, xxs. Twentie like pictures of half proportion, iij^{li}. iijs. iiij^d. xv of a lesser sorte, xxs. A picture of Christ taken from the Crosse, xvs. — Twoe pictures, olde, of poeticall stories, xs.' — Spanish and Englishe blanchettes, 10^l. 7s. 8d. Pillowes and a looking glass, 3^l. 18s. Bookes—'An old f. 27. Bible, iiij^s.; the twoe volumes of the Actes and Monumentes, old and torn, iijs. iiij^d.; viij psalters, vs. iiij^d.; a service book, xij^d. — Staves 4s. 10d. Rugges, 3^l. 13s. 4d. Counterpoints, 12^l. 8s. Canopies, 12^l. 3s. 4d. Curtaines, &c., 10^l. 10s. — 'A payre of playnge tables of bone f. 28. with hinges and claspes of silver, xxs. A billiarde table with the tooles apperteyninge, wth an old stained buckeram cover to it, iij^{li}. vjs. viiij^d. An Organ Virginall, iij^{li}.³ — The Chamber next the Gallerie, 23^l. 6s. 8d. The Second Chamber to the Great Gallerie called the corner Chamber, 28^l. 6s. 8d. The Third Chamber to the Gallerie, 38^l. 13s. 4d. The Withdrawinge Cham- f. 29. ber, 14^l. 6s. 8d. The Greate Chamber, 15^l. 10s. My Lords bedchamber in the lower end of the Great Chamber, 53^l. 10s. The next Chamber to my Lord's chamber at the upper end of the Little Gallerie, 24^l. 5s. The next Chamber at the lower end of the Great Chamber, 9^l. 10s. The Queene's Chamber, 24^l. 13s. 4d. At top of the Staires, 2s. 6d. The Chamber next the f. 30. Little Gallerie at the lower end, 13^l. The seconde Chamber adjoyninge next, 2^l. 13s. 4d. My Lady's Wardrobe, 1^l. 10s. M^{rs} Lettice Garrettes Chamber, 5^l. The hott house, 4^l. The

¹ Salad.

² John Casimir, the Count Palatine.

³ All these were apparently in the Great Gallery.

little chamber next the hott house, 3*l*. The Ladie Riches Chamber, 16*l*. The Ladie Riches f. 31.
 inner Chamber, 1*l*. 10*s*. The Porter's lodge, 1*l*. Mr. Sandes Chamber, 2*l*. Mr Warcop's
 Chamber, 6*l*. Mr Martin's Chamber, 3*l*. 6*s*. 8*d*. The redd Chamber, 4*l*. The greane Cham-
 ber, 4*l*. 10*s*. The second redd Chamber, 3*l*. 10*s*. The Chamber over the Chappell, 14*l*. 16*s*. 8*d*.
 The uppermost Chamber over the Chappell, 1*l*. 13*s*. 4*d*. The Kitcheners Chamber, 3*l*. The f. 32.
 next Chamber, 3*l*. In the Wardrobe, 87*l*. 6*s*. 8*d*. Sheetes, 36*l*. 9*s*. 8*d*. Close stooles, chamber
 pottes and wicker skrenes, 2*l*. 3*s*. 4*d*. In the Hall, 1*l*. 16*s*. 8*d*. The lower Parlor, 1*l*. 9*s*. 4*d*.
 Mr Hynde's Chamber, 2*l*. 2*s*. 6*d*. The Pantrye, 5*s*. The Buttrye, 15*s*. The Kitchen, 13*s*. 4*d*. f. 33.
 The Skullerie, 1*l*. 12*s*. 8*d*. The Drye Larder, 3*l*. 13*s*. 1*d*. The still house, 3*l*. The Brew- f. 34.
 house, 33*l*. 6*s*. 8*d*. The Forge, 2*l*. 8*s*. The Dairie, 14*s*. 10*d*. Cart stuffe, 52*l*. 16*s*. 11*d*. f. 35.
 Furniture of the Stable, 22*l*. 0*s*. 2*d*. Horses (12—'Baye Ley,' 26*l*. 13*s*. 4*d*.) 128*l*. Geldinges f. 36.
 (5) 10*l*. 13*s*. 4*d*. Irishe hobbies (12) 41*l*. 13*s*. 4*d*. Hacknies (9) 28*l*. 6*s*. 8*d*. Duble Geldinges
 (3) 15*l*. 10*s*. Carte horses (4 and a colt) 5*l*. 5*s*. Coatche horses (12) 87*l*. 13*s*. 4*d*.
 Summa totalis 1119*l*. 6*s*. 6*d*.

KENILWORTH.

Inventory taken on 28 October 1588.

The items are classified, and not given by rooms: contained on ff. 37-53.

Tapestrie, 837*l*. 4*s*. 3*d*. Bedsteeds with their apparell, 571*l*. 11*s*. 8*d*. Down beddes and
 fetherbeddes, 285*l*. 15*s*. Pillows of doune, 13*l*. 12*s*. Mattrices, 3*l*. Linnen Quiltes, 11*l*. 10*s*.
 Fustian blankettes, 27*l*. 12*s*. Rugges, 18*l*. 5*s*. Counterpoints, 62*l*. 4*s*. Sheetes, 40*l*. 3*s*. 8*d*.
 Pillow-beares, 39*l*. 4*s*. Lynnen in the Ewrie, 42*l*. 4*s*. Chaires, Cushions and stooles, 92*l*. 9*s*.
 Carpettes, 148*l*. 2*s*. 2*d*. Curtains, 20*l*. 19*s*. 8*d*. Pictures and Mappes—'Twoe greate tables of
 pictures of the Queene, xls. Twoe great pictures of the Earle in whole proportion, iij*l*. One
 picture of my Ladie in whole proportion, xls. A picture of Alexander the Greate, xls. xv lesser
 Pictures at xs. a peece, vij*l*. xs. xxij Pictures of lesser sorte at ijs. vjd. a peece, lvijs. vjd.
 Twentie cardes and mappes, xls.'—21*l*. 7*s*. 6*d*. Instrumentes—virginals, vyalls, bandores,
 chessboard, &c., and a bible—24*l*. 5*s*. 10*d*. Chestes, 6*l*. 8*s*. Close stooles (35) 13*l*. 1*s*. Cham-
 ber pottes, &c., 13*s*. Andirons, 25*l*. 10*s*. 10*d*. Tables, formes, and shelves, 25*l*. 2*s*. 10*d*. Copper,
 brass, and pewter, 49*l*. 18*s*. 4*d*. Iron stuffe, 25*l*. 19*s*. Armour, 328*l*. 4*s*. Shott, munition and
 armour—with the exception of 'a little brass peece on low wheels' at 40*s*., the Ordnance was
 not valued 'because the prizers knowe not howe to prize them or what valuation to sett vppon
 them'; there were 14 brass pieces, culverins,¹ sakers,² fawconettes,³ &c., and a great quantity
 of shot.

Summa totalis, 2684*l*. 4*s*. 1*d*.

VARIOUS HEADS.

ff. 54, 55. Inventory of all Leases held by the Earl—Sweet wines, 4000*l*.—Total, 14314*l*.
 6*s*. 8*d*.

ff. 56-63. Note of debts. There was due to her Majesty as it is supposed, 18000*l*. To
 Alderman Martin⁴ for plate, 3500*l*. The total—bills unpaid and money lent—was 53120*l*.
 8*s*. 5*d*.

ff. 63, 64. Money owing—a great part desperate—2196*l*. 10*s*.

ff. 65. Goods sent from Kenilworth to Langley and thence to London, 111*l*. 18*s*. 8*d*.

ff. 66-67. A Note of other parcells not sett down. A Tent, 160*l*. One old Barge for
 the river of Thames, 40*s*. An old coatch covered with leather, 10*l*. Another old coatch, 8*l*.
 The Ordnance, now valued at 150*l*. 'The Galleone Leicester' when she came into dock 'was

¹ Cannons, very long in proportion to their bore.

³ Light pieces of ordnance.

² Small cannon.

⁴ Richard Martin the goldsmith.

sore shaken with fight' (presumably in battle with the Armada) and was only priced at 250*l.* Total, 707*l.* 16*s.* 8*d.*

ff. 67-70. Jewells, 446*l.* 4*s.* 'The Duke of Alvayes¹ picture poiz. one ounce lacke a penny weight, xlvs.' The jewel left by will to the Queen was not valued.

ff. 71. A fuller account of the debts to the Queen which are now found to be 35087*l.* 2*s.*

Total of moveable goods, chattels, and debts, 24777*l.* 10*s.* 9*d.*

II. THE QUEEN'S COMMISSIONERS' INVENTORY OF THE GOODS AT LEICESTER HOUSE.

1590.

This Inventory is contained in *Exchequer Special Commissions* 1446 at the Public Record Office. In view of the much fuller Inventory for Probate it does not seem necessary to give it at length. The names of the rooms are therefore given in order, with the valuation set on their several contents, notes being added of any important variations or additions. The Inventory was made for an Inquisition held at St Clement Danes on 11 April 1590. The finding of the Inquisition was reported in the Exchequer in Easter Term 1590, and a writ was issued directing the sale of the goods. The Commissioners for this purpose when reporting on 11 July annexed schedules containing the Inventory. Summaries of the Writ and Report are given below, pp. 51, 52. The findings of the Inquisition, with copies of the Inventory and other documents, were entered in *K. R. Memoranda Roll* 398, m. ccxcv; therein is included the finding of the Inquisition as to Leicester House itself and its subsidiary tenements, see p. 51 below. Unfortunately there are no particulars, and it is not even possible to say in what order the tenements are given; but the messuage and wharf held by Francis Pytman we know from another source was at the bottom of Milford Lane,² and the tenement and stable held by John Archpoole and John Comley were probably also in the Lane; the other tenements, 19 in all, were probably in the Strand.

'An INVENTORY of the goodes and catalles which were Robert late Earle of Leicesters, founde in the howse of the said late Earle commonlie called Leicester howse in the parish of S^t Clement Danes in the Countie of Midd., the third day of Aprill in the xxxij yere of the raigne of our soueraigne Lady Queene Elizabeth, and the same day and yere seased and taken unto her Ma^{ties} hands by Richard Gournay and Stephen Soame, Sheriffes of the said countie, by virtue of her highness writt of *diem clausit extremum*,³ with an extent unto him directed out of her Ma^{ties} Exchequer in quindena Pasche.'

'In the Halle': 17*s.* 4*d.* See p. 37 above. Adds: 'one table with the armes of the said late Earle, vjs. viij*d.*' and two joyned stools.

'In the Greatest Chamber now in use': 14*l.* 15*s.* 10*d.* Furniture nearly as on p. 29 above, but omits the Instrument. The Hangings are valued at 13*l.* 6*s.* 8*d.*

'In the Wthdrawinge Chamber adioyninge': 12*l.* 4*s.* Only gives three pieces of hangings 12*l.* and a pair of Andirons. See p. 30 above.

'In the Gentlewomens Chamber': 14*l.* 2*s.* 6*d.* Nearly as on p. 32; but the Hangings are valued at 10*l.*

'In my Ladies Chamber': 83*l.* 3*s.* 4*d.* Nearly as on p. 32. The Hangings are valued at 40*l.* The bedstedd is described as 'gilded and trimmed wth tissue, paned wth Cloth of silver

¹ The Duke of Alva.

³ This Writ was issued on 12 February 1590.

² See p. 52 n. below.

wth the Lord Marques Armes in the head and testerne, the counterpoint of white and yellow taffeta trimmed wth a smale twiste, with curteyns of white and yellow taffeta'; *valued at 26l. 13s. 4d.* The Picture and Coffers are omitted. *There is added* 'A table painted in Cloth with a frame and one great looking glasse, xxs.'

'In the withdrawinge chamber next': 25l. 4s. 4d. *Nearly as on p. 32.* The couch bedstead *is described as* 'one Couche of Walnut tree wth the grene velvett bedd'. The picture of Diana *appears as* 'one paynted table wth Imagery over the Chimney' *valued at 20s.*

'In Mores Chamber': livery bedstead, 2s. 6d.

'In Jane ffowlers Chamber': livery bedstead, 2s. 6d.

'In the High Gallery': 18l. 12s. *The furniture is nearly as on p. 30; but the Maps and Pictures are given more fully:* 'two Cards or Mapps, xxs. A picture of the Quenes Ma^{tie}, xxs. Three pictures in Large Tables, one of the Earle of Leicester, one of the Earle of Warr., and the third of the Lord Admirall,¹ 1s. Other pictures in tables, viz. of the Prince of Oringe, Duke Cassimere,² Sr Phillipp Sidney, Mr Henry Knowles,³ the Earle of Leicester twice, a picture of Beachampe, of the Lady Dacres Daughter, the yonge Baron of Denbigh,⁴ one other childes picture, three smale pictures, two of men and one of a woman, a greate picture of a woman, six small mapps in frames, a table of a woman wth fruytes and other thinges,⁵ the picture of a yonge gentleman, of Penelope, of two yonge ladies, of the ffrech Kinge and of Julius Cesar, vj li.' *At the end is added* 'Upon the stayers a lanthorne of white lattyn, ijs.'

'In the Maydes Chamber': 30s.

'In Mr Garnettes Chamber': 11l. 4s. 4d. *Nearly as on p. 30; but gives 3 pieces of hangings valued at 5l., and omits the pallet bed, and the picture. The field bed is valued at 3l. 10s.*

'In Mr Whites Chamber': 53s. 4d. *Nearly as on p. 29; adds an old table and a horse cloth.*

'In Mr Lawrence Chamber': 32s. *Nearly as on p. 37.*

'In Clemes Chamber': 53s. 4d.

'In Boyeses Chamber': 40s.

'In John Lacies Chamber': 3l.

'In M^{ris} Madlyns Chamber': 53s. 4d.

'In Mr Barkers Chamber': 3s.

'In Mr Blountes Chamber': 5l. *May possibly be the same as M^r Sandes Chamber on p. 33.*

'In the Lowe Gallerie': 12l. 15s. 10d. *Nearly as on p. 34.* The chairs *are described as* 'Venice cheires'; the table *as* 'one rounde table of sweete wood underpropped with bears'.

'In the Wardrobe': 9l. 16s. 8d. *Includes a bed and bedding; a great chest; a jewell coffer; two tables, a buckeram screen, and 12 latten lanterns. For the screen see p. 39.*

'In my lorde of Warwicks bedd Chamber': 27l. *Nearly as on p. 35.* The bed *is described as* 'one Sparver of Crimsen veluett, paned with clothe of silver, grene and red, ymbrodered, with a Counterpointe of Crimsen taffata, wth the Garter, ymbrodered and edged wth ragged staves'. The table *as* 'a danske table and frame'.

'In my lorde of Warwicks Dyninge Chamber': 27l. 6s. 8d. *Differs a good deal from p. 35.* 'One downe bedd and boulster, one large pillowe, one lynnyn quilte, one mattres, one bedsteede, one little pillowe, vj li. xiijs. iiij d.⁶ Three suites of Chaires, all ymbrodered, with

¹ These are probably the 'whole proportion' portraits given in the list in *Notes and Queries*, 3rd ser., ii, 225.

² John Casimir, the Count Palatine.

³ Eldest son of Sir F. Knollys.

⁴ Leicester's son.

⁵ 'A picture of a free selling fruitage.' *Notes and Queries*, ut supra.

⁶ This may be the bed in the Closet; see p. 35 above.

their stooles and longe Cushions, *vli. xiijs. iiijd.* Two Courte Cupbordes, one longe table of walnut tree, and one tisshue Cheire, *vli.* One Cheire of purple velvett riche ymbrodered, *xls.* A table carpett and a close stoole of figured satten, *xls.* Two roabes of purple velvett of the order of the garter, *vli.*

'In the Greate Chamber next the Garden': *21l. 10s.* *Differs a good deal from p. 36.* A cradle, a canape and a Chaire, *iiijl.* A table wth her Maties Armes, *xxs.* A cheste of vyalls, *xxvjs. viijd.* A square table wth a fouldinge frame, *ijs. iiijd.* Two brasse pannes to sett before the fier, *xiijs. iiijd.* Two beare hides, *xs.* One longe table of Deale, *xs.* Three partisans, *xxs.* Six curasses, *iiijl.* One old bedsted, *xxd.* A pike and an ensigne staffe, *vs.* A cradle of yron, *vs.* A Bandore and the case, *ijs. iiijd.* A cheste, a verie olde carpett for a Cupborde, and a turkie Carpet of six yardes longe and a peice of olde hanginges, *vli.* Three pannes for close stooles, *vs.* A foote clothe of black velvett ymbrodered wth goulde, *iiijl. vjs. viijd.* Two muskettes, *xxs.*

'In my Lorde of Essex withdrawinge Chamber': *20s.* *Gives only:* 'a painted table, a cheste barred wth yron, a close stoole with a panne.' *See p. 33.*

'In his bedd Chamber': *30s.* *Gives only* 'one Courte cupborde and a danske cheste guilt'. *See p. 33.*

'In the vtter Chamber': *30s.* A danske cheste guilt and a court cupborde.' *See p. 33.*

'In my Lady Garrettes Chamber': *26l. 13s. 4d.* *Nearly as on p. 30.*

'In my Ladie Ryches Chamber': *18l. 16s. 4d.* *Nearly as on p. 31.* The hangings are described as 'four ells deepe conteyninge clxxiiij ells' and valued at *10l.* The bed is valued at *6l. 13s. 4d. only.*

'In the lodge Chamber': *30s.* *Gives only* a bed and bedding. *See p. 38.*

'In the larder': *1l. 15s. 8d.* *Gives various pewter vessels, a table and a form.* *See p. 37.*

'In the Kytchin': *4l. 2s. 8d.* *Nearly as on p. 37.*

'In the buttery': *10s.* 'Five livery gallon pottes of pewter.'

'In the pantrie': *18s. 6d.* *Various cloths and towells.* *See p. 37.*

'In the Chaplins Chamber': *16s. 8d.* A folding table, two leather chairs, a map, bedding, &c.

'In Keymes Chamber: *5s.* 'A bedstedd corded.'

'In Neddies Chamber': *40s.* Bed and bedding.

'In the Kitchin boyes Chamber': *10s.* Bed and bedding.

'In a little Chamber at the Stayre hedd': *40s.* Bed and bedding.

'In the Chapell': *5s.* *Gives only* an old chest. *See p. 31.*

'In the Vestry': *20s.* 'Four old Chestes of leather, a table, and a lattyn lanterne.'

'In the Napery Chamber': *20l.* *A quantity of linen.*

'In the Armory': *3l.* *Only* 'vj Callyvers without flaskes and Tuchboxes *xls.*' and 'three old Chestes of leather, *xxs.*'. *See pp. 27, 43, 44.*

'In the Wardrobe': *70l. 13s. 10d.* *A quantity of linen.*

'In the Riche Wardrobe': *26l. 13s.* *Begins with pictures, viz.:* 'Seaven mapps or plottes, *xs.* An old picture of her Matie, *xs.* An old picture of the Earle of Leicester, *ijs.* One painted table, *xijd.* A story paynted on a table, *ijs. iiijd.* A picture of Charity, *ijs.* viij pictures of men, *xxxs.* Eleven pictures of weomen, *xvs.* A naked boy painted,² *ijs. vjd.* [The other Inventory has: 17 maps, 40 pictures, and 8 table painted pictures, see p. 26 above.] Other principal items are: 'A Venice chest *xxxs.* A great lookinge glasse, *xxvjs. viijd.* A Chest with iiij vyolls, *xiijs. iiijd.* A map lyned with wrought velvett, *vjs. viijd.* iij gylded rapiers and

¹ See 'the Stayrehead Chamber' on p. 53.

² 'A naked boye with a ded mans skull in his hand and an houre glass under his arme.' *Notes and Queries*, 3rd ser., ii, 225.

daggers, xxs. vij other rapiers, xxs. Two battell Axes, iij*s.* iij*d.* Plates for an armed saddle, xs. Two morions, guylt and graven, xii*s.* iij*d.*¹ The Earle's armes in a glasse, i*s.* Halfe a saddle cloth of blacke velvett imbrodered, xxxvs. *There was also a quantity of linen 'In a chest there'.*

'In the Banketting howse': 4*l.* 15*s.* 'A table of marble with a frame, iij*l.* A rounde table and a Court Cupbord and a lyttle feild Bedstedd, xxx*s.* An olde close stoole of blacke velvett, vs.' This appears to include furniture in the Lower Room and the Gardener's Chamber. See pp. 23, 24 and 34, 35 *above*.

'In the Wardrobe': 5*l.* 'One chest wth Certaine Bookes in ffrench, lattyn, Italian, and Dutche in yt, vi*l.*' See pp. 26, 36 *above*.

'Summa Totalis, iij C. lxxviii*l.* vi*s.*

Attached to the Inventory is a copy of a Writ issued on 1 June 1590 to John Hill, esquire, an auditor of the Echequer, Alexander King, esquire, another auditor of the Exchequer, Robert Davy, esquire, and Hugh Wollaston, gentleman, undersheriff of Middlesex: whereas certain goods and chattels of Robert, late Earl of Leicester, specified in the annexed schedules 'were lately seized into our hands . . . for debts of the late Earle to us by his writing dated xij December in the xxiiijth yere of our reigne . . . which said goods remaining in the hands of the sheriff unsold for lack of buyers', they are now to sell them for the best price available and pay the proceeds into the Exchequer.

*The Inventory is followed by: Responsio Commissionariorum in hac commissione nominatorum. Prefati Johannes Hill etc. virtute huius commissionis, consultis diversis aliis hominibus ad illos accursitis pro emendacione precii et valoris premissorum, barganisaverunt et vendiderunt Johanni Sidley de Southefolke in Com. Kent, armigero, et Johanni Wakeman de Beckford in Com. Glouc., generoso, sexto die Julii anno regni Domine nostre Regine Elizabethe tricesimo secundo, omnia et singula bona, supellectill. et alia in his scedulis mencionata et comprehensa pro summa Dxlvi*l.* bone et legalis monete Anglie. Et sic accrevit Domine nostre Regine de incremento ultra summam per Vicecomitem Com. Midd. nuper certificatam lxxvj*l.* xii*s.* Que quidem summa Dxlvi secundum tenorem huius Commissionis prelata fuit coram Domino Thesaurario et Baronibus de Scaccario apud Westm. et ad Receptam eiusdem Scaccarii per Johannem Hill, Alexandrum King et Robertum Davy, Commissionarios predictos, persolvitur in forma sequente, viz. xj^o die Julii anno xxxij^o Domine nostre Regine Elizabethe per unam talleam ad eandem Receptam levatam CCxlv*l.* in toto supra, prout per easdem talleas Baronibus huius Curie ostensas plenius patet.*

In K. R. *Memoranda Roll*, 398, m. ccxcv, for Easter 1590 the finding of the Inquisition, after reciting the value of the Earl's goods at Leicester House, continues thus:—

'Uterius prefatus nuper Comes xij^o die Decembris anno regni Domine nostre Regine xxiiij^o seisitus fuit in dominico suo ut de feodo de et in uno capitali messuagio ac uno gardino cum pertinenciis scituato et existente in parochia Sancti Clementis Dacorum extra barras Novi Templi London., in Comitatu Midd. predicto, modo in tenura Christofori Blount, militis, et domine Leticie, Comitisse Leicestrie, modo uxoris eius, clari annui valoris ultra reprisas quinquaginta librarum.'

The Earl was also seised in a number of other tenements in the tenure of the persons and of the clear annual value as follows: Thomas Slye (two tenements), 6*l.* 13*s.* 4*d.*; Hugh Bonnell or his assigns (three tenements), 7*l.* 13*s.* 4*d.*; William Cleybroke, 3*l.*; Mary Buck, 3*l.* 13*s.* 4*d.*; Gilbert Neale, 26*s.* 8*d.*; Nicholas Maddock, 3*l.* 13*s.* 4*d.*; Elizabeth Jackson, 4*l.*; George Jackson, 26*s.* 8*d.*; Margaret Beare, 40*s.*; Robert Serkeney, 26*s.* 8*d.*; John Ranger, 26*s.* 8*d.*; John Blackborne, 30*s.*; Denys Orme (two tenements), 4*l.* 13*s.* 4*d.*; George Dallyen, 3*l.* 10*s.*;

¹ This is all the armour given here; but see the other Inventory on pp. 43, 44.

John Aldersey, 26s. 8d. Also of a messuage and wharf in the tenure of Francis Pytman,¹ 10l.; a tenement in the tenure of John Archpoole, 10s.; and a stable in the tenure of John Comley, 2s. All these were in St. Clement Danes and their total annual value was 57l. 12s.

Then after the Inventory of Leicester House comes a statement that upon the usual proclamation whether any one wished to sue information why the Queen should not take these goods in satisfaction of the debt, no one appeared; whereon the Sheriffs took the messuage, lands, and tenements into possession till the debt was discharged. The Court, desiring to be further satisfied of the value of the goods, ordered John Hill and Alexander King, two of the auditors, and Robert Davy and Hugh Wollaston, the undersheriffs, to sell at the best price obtainable and at any rate for more than the sums at which the goods were severally valued. In Michaelmas term Hill and his colleagues reported that they had been sold to Sidley and Wakeman.

III. THE LEASE OF A MOIETY OF ESSEX HOUSE IN 1639.

This lease was printed in *Collectanea Topographica et Genealogica*, viii. 309-12, from an original copy then in the possession of Earl Ferrers. It is so important to the present purpose that it seems necessary to give the chief part of it here. It is an Indenture made on 11 March, 14 Charles I (1639), between the earl of Essex, John Selden of the Inner Temple, William Wingfield of St. Clement Danes, and Edward Roche of Chartley on the one part, and William Seymour, earl of Hertford, and the Lady Frances his wife on the other part. In consideration of 1,100l., the earl of Essex demised to the earl and countess of Hertford for a term of ninety-nine years, if they or either of them lived so long, at the annual rent of 12d., the buildings, etc., hereafter particularly mentioned, that is to say:

'All that and those staircase and staires leading and assending out of and from the northward side of the great hall of and in the said capitall messuage unto the great chamber there being directly over the said great hall; and the darke roome or woolhouse, the dore whereof openeth about the middle of the said staires; and the said Great Chamber; and the moytie undivided of the little roome adioyning to the westward end of the said great chamber; and the chamber adioyning to the eastward end of the said great chamber, and there now called the Wthdrawing Chamber; and the two chambers or roomes lyeing on the north parte of the said wthdrawing chamber; and the chamber or roome lyeing and being over the same, together wth the staircase and stayres leading thereunto; and all that entry next adioyning to the northward part of the foresayd stayres leading from the said great hall to the said great chamber and the three chambers adioyning to the same entry, the w^{ch} entry and three chambers are lyeing and being on the first and next floore over the cellars there, lyeing adioyning to the eastward side of the foreyard belonging to the said capitall messuage (the same cellars being now in the seuerall use and occupation of the said Earle of Essex) and also the moytie undevide with the said Earle of Essex his heires and assignes of the roome or broad entry adioyning or leading into the chapell of the said capitall messuage; and also those foure chambers lyeing adioyning upon the second floore over the said cellars, together wth the staire case and stayres and entries there, leading to the said foure chambers; and the Long Gallery lyeing and being upon the third floore over the said cellars; together with the staire-case, staires and entry there, leading and adioyning to the same gallery, and those two pairs of stair cases and staires leading and ascending out of the little yard or court belonging to the said capitall messuage, called the Plompe Court, viz. one of them leading into two chambers parcell of the said messuage, and the other of them

¹ For lease of messuage and wharf at the end of Milford Lane granted by Sir C. Blount and the Countess of Leicester to Francis Pitman see *Chancery Proceedings* (Series II), James I, C. 17/9.

leading unto one other chamber there, together wth the same three chambers; and all that Buttery or pantry being neare unto the eastward end of the said great hall, and the cellars lyeing wthin the said little buttery, the same now being in the severall use and occupacion of the said Earle of Hertford; and all that yard or parcell of ground lyeing neare unto the same little buttery dore and adioyning in length to the eastward side or parte of the said capitall messuage, and the moytie undevied wth the said Earle of Essex, his heires and assignes, of the entries, stair case and staires leading and ascending from about the said little buttery dore and yard dore upwards unto the eastward dore of the said wthdrawing chamber; and the entire stair case and stayres leading from the said eastward dore of the said wthdrawing chamber upwards unto the foure chambers lyeing upon one floore upon the eastward side of the square paved court parcell of the said capitall messuage; and the same foure chambers wth the entries and closetts thereto belonging [to] the same foure chambers, extending in length from the said stair case southward to the garden of the same messuage; and alsoe the gallery lyeing over the same foure chambers, and the entry staire case and staires leading from the said foure chambers unto the same gallery; and the waynscotted chamber and the little roome called the Stayrehead Chamber¹ att the topp of the saide staire case, being wthout the said gallery; and all the chambers, closettes and roomes lyeing and being wthin the same gallery and the tower and tirrett att the southwest end of the same gallery, together wth the staire case and staires leading from the said gallery to the said tower, and liberty of way and passage downe the staires from the said gallery to the said tower; and liberty of way and passage doune the staires from the said gallery unto the leads there neare, for the said Earle of Hertford and Lady Fraunces and their servants and attendants to walk upon the said leads; and alsoe all the Little Kitchen and the Pastrey thereunto adioyning, and the little roome neare unto the said Kitchen, called the Larder, now being in the seuerall use and occupacion of the said Earle of Hertford; and the little enclosed yard called the Cole yard, heretofore parcell of the said foreyard, and all that coach-house in the same foreyard, w^{ch} lyeth most southward, and all that stable, being a double stable, w^{ch} lyeth most southward scituate in Milford Lane in the said parish of St Clement Danes, together wth the haylofts and roomes over the same stable, and now being in the severall use and occupacion of the said Earle of Hertford. And the moytie or one half in common wth the said Earle of Essex his heires and assignes of the said Great Hall. And the moytie undevied of the roome or closett lyeing betweene some or one of the said first mentioned foure chambers² and the said Chappell, and the moytie undevied of the said Chappell; and the moytie undevied of all and euery the gardens, walkes, garden plotts, and orchards, belonging to the said capitall messuage, and alsoe the moytie undevied of the said foreyard, and the moytie undevied of the said Plumpe Court or yard, and of the plumpe therein being . . .

‘And it is alsoe agreed by the said parties hereunto, that the said Earle of Essex his heires and assignes allowing and allotting unto the porters and gardiners of the said messuage and premisses, during the said terme of years hereby demised, the accustomed roomes and housing heretofore allowed and allotted for their habitacions or lodgeing: that he the said Earl of Hertford and Lady Fraunces his wife shall during the same terme satisfy, beare and pay the one moytie or halfe part of all other their enterteynment and wages whatever, and of all such convenient charges as shall be further paid for their helpe in supplying their said places of porter and gardiners in and about the premisses; and shall alsoe beare one halfe of the charge of fire and lights to be used and spent in the said Great Hall when the said Earle of Essex and Earle of Hertford, or the said Earle of Essex and Lady Frances, shall be there dwelling att one and the same tyme during the said terme; and shall alsoe beare and pay the one half of

¹ See p. 50.

² This does not seem clear, unless the Chapel occupied more than one floor; since the entry to the Chapel was apparently on the floor below the four chambers.

all parish taxes, charges and dueties imposed upon the said capitall messuage and premisses during the said terme; and that the said Earle of Hertford and Lady Frances and their assignes shall during the said terme have the [use] in common wth the Earle of Essex and his heires of the sitting places and pewes in the parish church of S^t Clement Danes aforesaid belonging to the said capitall messuage.'

DISCUSSION.

The TREASURER mentioned a link between Essex House and the present day. He himself occupied chambers in Fountain Court, which were part of the Temple; but though the entrance was by the Temple gateway, for some purposes the chambers were not in the Temple nor in the City, but in Westminster. The Temple had absorbed one house in Essex Street; whereupon the front door was closed and another one opened.

Canon WESTLAKE selected one point of many for discussion. The first Exeter Inn was not in the Strand. The first London palace of that name was set up by Henry Marshall in Long Ditch (Prince's St.) early in the thirteenth century. That was shown by the fact that the bishop of Exeter had to obtain permission from the abbot of Westminster to have a priest to minister to him.

Mr. BAILDON thought the building in the south-east corner of the plan near the river was probably a banqueting house. Such houses were often detached from the main block; and one of the slides appeared to show a view of a detached banqueting house.

Mr. KINGSFORD replied that Mr. Baildon's suggestion probably solved a difficulty as to the position of the banqueting house. In early times the episcopal Inns were not fixed; Bishop Stapledon when bishop of Exeter had a hostel (probably his own) in Eldedenes Lane.

The CHAIRMAN (Mr. GIUSEPPI), in tendering the thanks of the meeting to Mr. Kingsford, remarked on the difficulty of obtaining the mass of material incorporated in the paper.

II.—*Wharram-le-Street Church, Yorkshire, and St. Rule's Church, St. Andrews.*
By JOHN BILSON, Esq., F.S.A.

Read 28th June 1923.

LAST year I had the honour of submitting to the Society a communication¹ on a remarkable church on the Yorkshire Wolds, which lies in the middle of a wide district within the northern border of the East Riding which the evidence of Domesday proves to have been still derelict in 1086. Weavertorpe church was built in the second decade of the twelfth century by Herbert the chamberlain (the father of St. William of York), and its examination showed that, in spite of the essentially Norman character of all its details, it retains certain pre-Conquest characteristics in the relative thinness of its ashlar-faced walls, the absence of the usual pilaster buttresses, and the tall proportion of its unbuttressed tower. Reference was then made to a still more remarkable example of this overlap in the somewhat earlier church of Wharram-le-Street, which I venture to think is of sufficient interest to justify more extended notice, for two reasons. Its tower belongs to a type which there is reason to believe was common in the England of Edward the Confessor's time. There has always been great difficulty in dating many of these towers, because, while some of them show no details which can be pronounced to be definitely Norman, the character of many others is much more doubtful. The importance of Wharram lies in the fact that, while it retains so much that undoubtedly belongs to the pre-Conquest English tradition, it also shows details which are just as certainly of Norman origin, and afford material for assigning an approximate date to its building. Its second claim to our attention is the conclusion which its examination seems to justify, that the influence of the school to which its master-mason belonged extended far away into Scotland.

Wharram-le-Street lies near the western edge of the Wolds, on the 'street' which runs south-east from Malton,² in continuation of the 'street' running west from Malton, on which are two other interesting early towers.³

¹ *Archaeologia*, lxxii, 51.

² For this road, see W. Boyd Dawkins, *Archaeological Journal*, lxi, 316, and E. Maule Cole, *East Riding Antiquarian Society's Transactions*, vii, 43.

³ Appleton-le-Street and Hovingham.

The original plan of the church (fig. 1)¹ was of the usual type—a square-ended chancel, an oblong nave, and a western tower. A north aisle was added to the nave during the first half of the fourteenth century, in two sections, with a wider eastern and a narrower western arch inserted in the original north

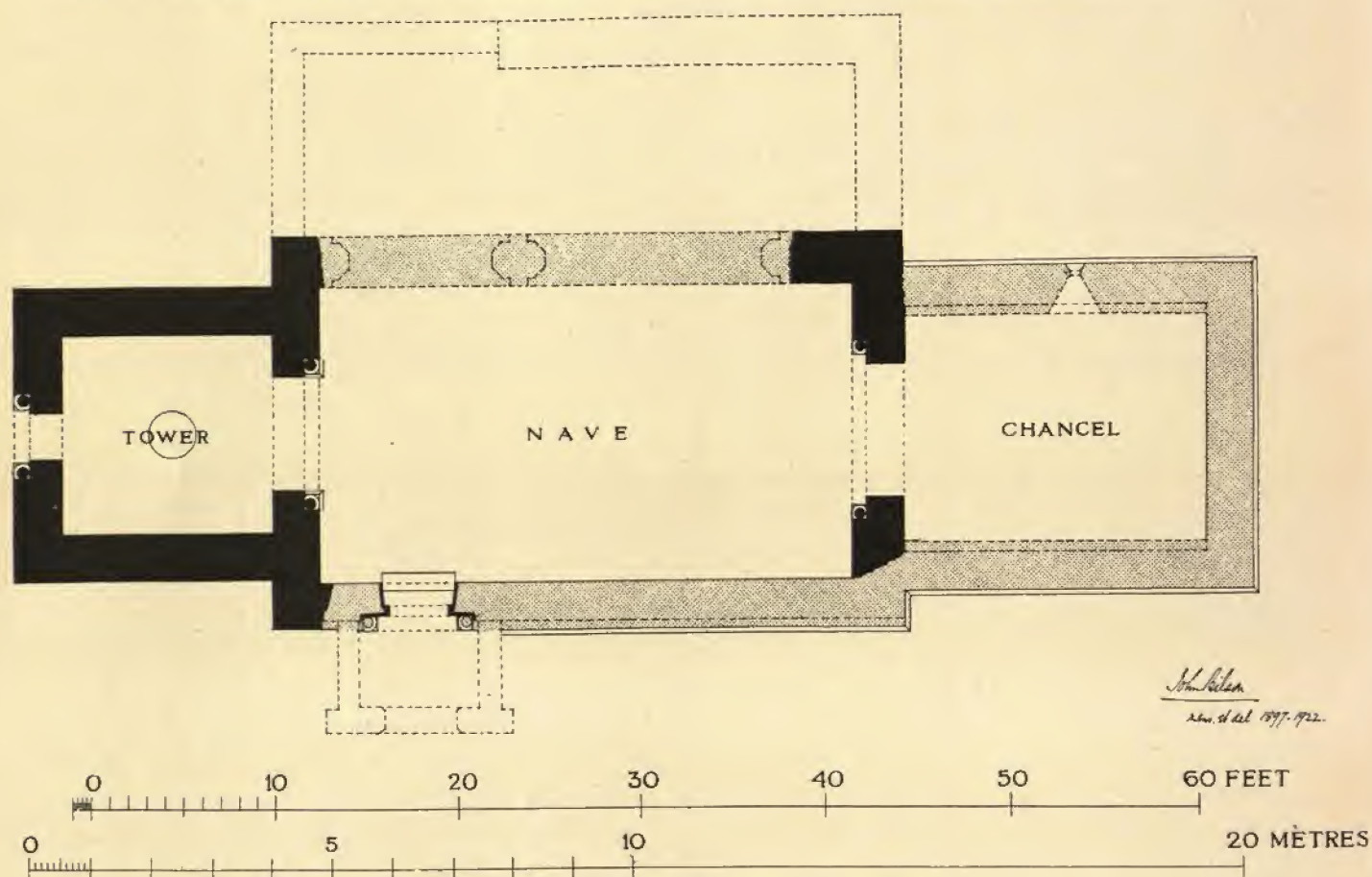


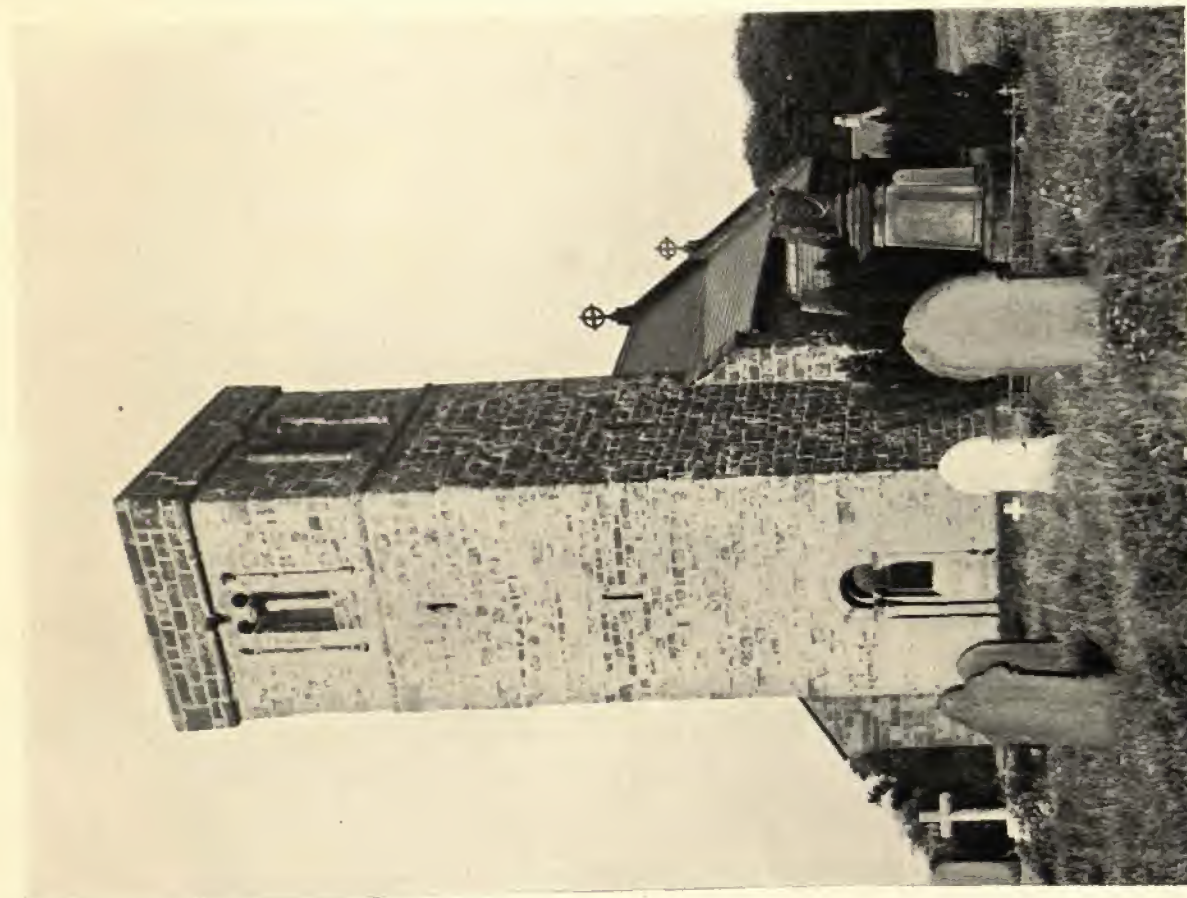
Fig. 1. Wharram-le-Street Church, ground plan.

wall. The south wall of the nave is a modern rebuilding, and the chancel was rebuilt and the south porch added about 1862.²

As the tower is the part of the church which has undergone least alteration, it will be convenient to describe it first.

¹ On the plan, original work which still remains is shown black. The lighter shading shows original walls which have been destroyed or rebuilt. Later works are dotted and unshaded.

² *Associated Architectural Society's Reports*, vi, p. cxvi. My friend, Mr. Walter H. Brierley, F.S.A., has kindly lent me the original drawings of the church by Messrs. T. B. and Wm. Atkinson, for Lord Middleton, dated July 1862. From these drawings it would appear that the rebuilding of the chancel was not contemplated when they were made. The works then carried out included, besides the rebuilding of the chancel and the addition of the south porch, the opening out of the western arch of the nave arcade and of the tower arch, which had been blocked up, the insertion of a window in the blocked west doorway, and new roofs.



J. V. Saunders, phot.

1. Exterior from south-west



J. V. Saunders, phot.

2. South face of Tower

WHARRAM-LE-STREET CHURCH

Published by the Society of Antiquaries of London, 1924



1. Tower Arch

J. V. Saunders, phot.



2. West Doorway

J. V. Saunders, phot.

WHARRAM-LE-STREET CHURCH

Published by the Society of Antiquaries of London, 1924

The tower measures internally 11 ft. 5 in. from east to west by 10 ft. 7 in. from north to south, and its walls are 2 ft. 6½ in. in thickness.¹ The external width of its west face is 15 ft. 8 in., and its present total height is about 51 ft. The tower and those parts of the original church which have survived are built of calcareous grit, which outcrops below the western edge of the Wolds. The masonry is of squared stones, showing rather roughly executed ashlar faces both externally and internally. The courses vary in height, but generally average 10½ to 11 inches. The quoins are larger, averaging about 15 inches in height, and there are also larger stones on each side of the west doorway (see pl. vi, 2).

The tower arch (pl. vi, 1) is tall and narrow, with a clear width of 6 ft. 1 in. and a height of 10 ft. 9 in. from the floor to the springing of the arch. The jambs are square recessed on the nave side only, with an 8-inch detached shaft in the nook of each. The bases of the shafts (fig. 2) have the unusual profile, which is certainly not Norman,² of a very tall single hollow, 12½ inches high, above a 3-inch flat face, below which is a chamfered plinth. The capitals (figs. 2 and 3) are of an unusual tall 'cubic' type which is worth attention. The 'cubic' capital was not the normal type in Normandy, but in England the Normans systematized it into the capital which we call 'cushion', which may be described as an approximation to a cube penetrated by a portion of a single cone, or by portions of four cones. Of the more rudimentary English types, two may be noticed. In one, the square of the upper part is gradually worked away towards the circle of the shaft, giving a horizontal section towards the shaft which approximates to a circle. In the other, the angles of the square are bevelled off towards the shaft, giving a horizontal section approximating to an octagon.³ These Wharram capitals belong to the first type, overlaid as it were with the slightly projecting triangles which derive from the second type. The capitals

¹ The Northumberland towers of Corbridge (originally a porch), Bywell St. Andrew, Warden, and Whittingham are of similar size, and the walls of the towers of Corbridge, Bywell St. Andrew, Bolam, and Whittingham are 2 ft. 7 in. in thickness (C. C. Hodges, *The Pre-Conquest Churches of Northumbria*, in *The Reliquary*, vii (new ser.), pl. iv, opp. p. 85). The tower of Restennet (Forfar) measures externally 15 ft. 6 in. from east to west by 15 ft. 11 in. from north to south, with walls 2 ft. 8 in. thick (Macgibbon and Ross, *The Ecclesiastical Architecture of Scotland*, i, 178). The towers of several Wold churches (later than Wharram) have very similar internal dimensions, but, as their walls are thicker, their external bulk is greater. Frequently these towers are not quite square, but their greater dimension is not always in the same direction.

² I use the term 'Norman' here to indicate the Norman Romanesque from the time of the Conquest to the end of the eleventh century.

³ There are capitals of this type in the west doorway of Kirkdale (Yorkshire), and in the tower of Broughton (Lincolnshire), illustrated in G. Baldwin Brown, *The Arts in Early England*, ii, 98, fig. 49 b, and 213, figs. 128 and 129. The late J. T. Micklethwaite attributed Broughton to about 1050-60 (*Archaeological Journal*, liii, 335), but the characteristically Norman base profile of a double hollow suggests a post-Conquest date.

have no neckings. The abaci have a large hollow chamfer beneath a flat face,¹ which is not a Norman profile.² The inner faces of the opening are finished with imposts of the same section, which have the archaic peculiarity of not being returned on the east face, though they are returned under the arch on the west face. Another survival, remarkable in such a large opening, is the inclination of the jambs, the width of the opening being $2\frac{1}{2}$ inches less beneath the imposts than at the floor-line. The arch, which has two square-edged orders next the nave, and one towards the tower, has some characteristics which derive from earlier tradition. The semicircular curve of the arch is continued to produce a pronounced horseshoeing at the springing.³ The voussoirs of the inner order run through the whole thickness in single stones. The construction of the arch is curious in that, instead of the intrados of the outer order being built upon the extrados of the inner order in the normal fashion, the face of the inner order goes up behind the back of the outer order⁴ (fig. 2). The joints of some of the voussoirs are not radiated correctly,⁵ and some of those near the springing slope downwards towards points much below the centre of the arch-curve.⁶ The outer order springs too far back over the capitals, showing imperfect appreciation of the logical relation between arch and support. It is worthy of note that, while the walling generally is set with thick and irregular joints, the masonry of the tower arch and its jambs is accurately worked with fine joints of only $\frac{1}{4}$ to $\frac{3}{8}$ inch.

Externally, the unbuttressed tower (pl. v, 1) has no plinth, but there is a foundation set-off 5 to 7 inches wide at the ground level. The tower may be said to be four stages in height,⁷ but the lower three stages rise perfectly plain, without string-course or set-off, and are pierced only by the west doorway and by the loops which light the second and third stages.

¹ On the side next the nave the abaci were originally returned a short distance beneath the outer order of the arch. On the south side the projection has been cut away (indicated by the dotted lines on figs. 2 and 3); on the north side the projection remains.

² i. e. not Norman of the Conquest period. The profile occurs however in one of the earliest churches in Normandy, in the imposts of the ground-story arcade of Saint-Pierre, Jumièges, which is believed to date from c. 940 (R. de Lasteyrie, *L'architecture religieuse en France à l'époque romane*, p. 153 and fig. 137; Roger Martin du Gard, *L'abbaye de Jumièges*, pp. 26 and 195, and fig. 25).

³ M. de Lasteyrie (*op. cit.*, 319) speaks of the horseshoe arch as a survival of Carolingian practice, and adds—'la Normandie est la province qui semble en fournir le plus d'exemples'. My friends Dr. Coutan and M. Louis Régnier, however, confirm my own observation that the horseshoe arch is by no means frequent in Normandy. It is true that the form is found at Bernay (crossing-arches, etc.), where however it seems to be simply a variety of stiling, as in some of the arches of the main arcades and triforium of Ely cathedral, and is much less pronounced than in the tower arch at Wharram.

⁴ The arch of the west doorway is constructed in the same manner (fig. 4).

⁵ Cf. G. Baldwin Brown, *op. cit.*, ii, 127.

⁶ So also in the tower arch of Restennet (Forfar).

⁷ There is now no floor between the second and third stages.

The west doorway (pl. VI, 2) is very narrow and tall, only 2 ft. 6 in. in clear width, and 8 ft. 2 in. high from the threshold to the springing of the arch. The plan of its jambs is precisely the same (and of the same scale) as that of the

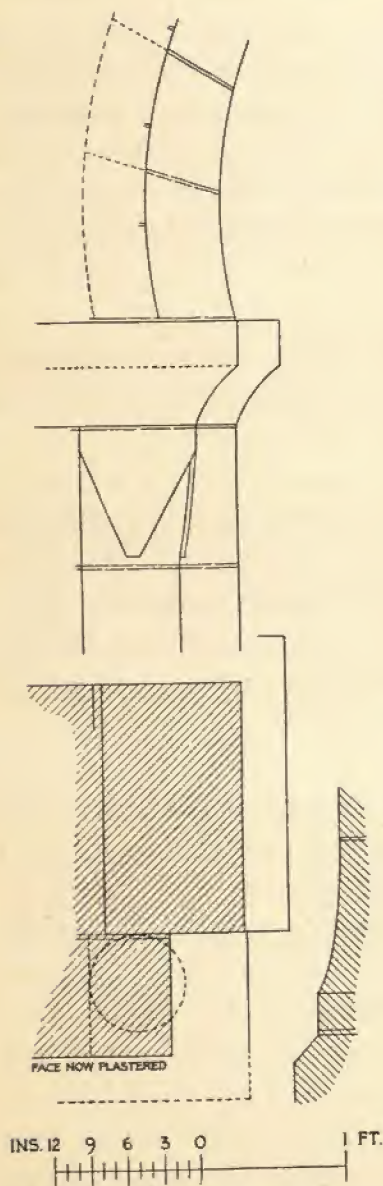


Fig. 2. Wharram-le-Street, tower arch.

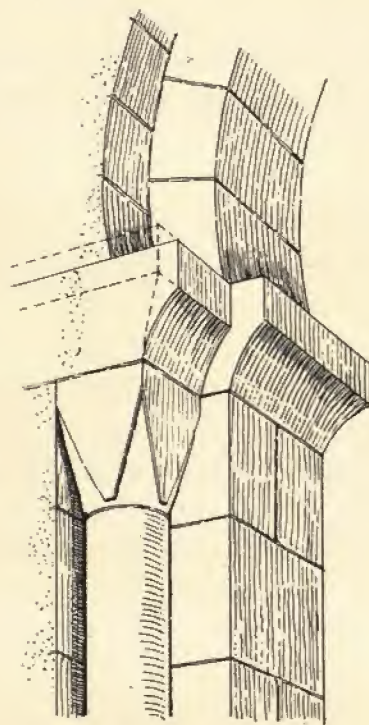


Fig. 3. Wharram-le-Street, tower arch, east face.

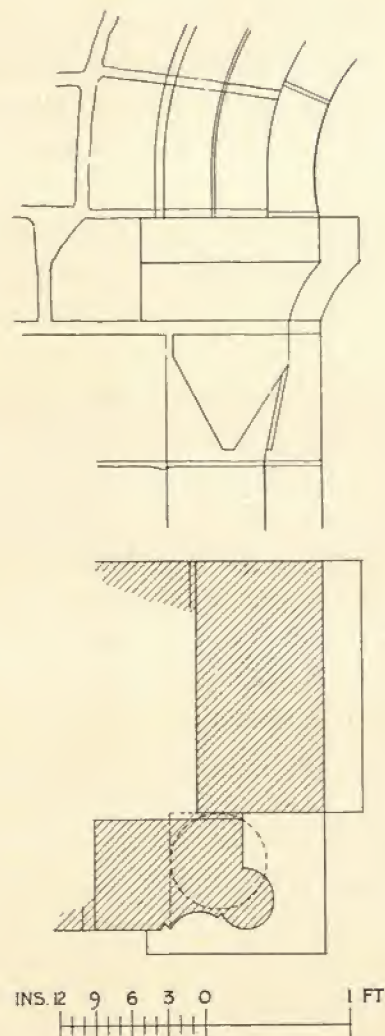


Fig. 4. Wharram-le-Street, west doorway.

tower arch, in spite of the difference in the size of the openings. The detached shafts have the same tall hollow profile of base,¹ the same cubic capitals without neckings, the same abaci and imposts, with the same peculiarity that the impost

¹ The hollow here is only about 10 inches high.

moulding is not returned on the face. The jambs are not rebated, and the imposts run through to the inner face of the wall, where they are not returned. The jambs are inclined, the width of the opening being 2 inches less beneath the capitals than at the sill. The arch is of two orders, the outer moulded, and the inner square-edged. The outer order, which is semicircular stilted, is moulded (fig. 4) with an angle roll, a hollow with a quirk on each side of it, and a flat face, which is a very characteristic Norman profile, but it has the non-Norman peculiarity that the soffit, instead of being quirked to the angle roll in line with its lower face, is sunk back to the extent of about half the diameter of the roll. This sunk soffit occurs in the crossing arches of Stow (Lincolnshire), and with a simple angle roll in the arch of the south doorway¹ of the tower of Broughton (Lincolnshire). It occurs also, with precisely the same profile as at Wharram, at St. Rule's, St. Andrews.² The unmoulded inner order is slightly horseshoed; its face passes up behind the back of the outer order, and its joints are incorrectly radiated, as already noticed in the tower arch.

On the south external face of the tower, about 15 feet from the ground, is a dial stone,³ which may well be in its original position. This again represents a survival of an earlier tradition.

Above the tower arch is a doorway, now blocked on the side next the nave, 4 ft. 6 in. high to the springing of its stilted semicircular arch. Its jambs are slightly inclined, the width of the opening at the sill being 2 ft. 0½ in., and at the springing 1 ft. 11 in. The arch again shows the incorrect radiation of its joints, one of the stones near the crown being nearly triangular. The sill is about 3 feet above the underside of the wall-plate of the modern roof of the nave, and the doorway gave access to the roof-space above the original flat ceiling of the nave.

The second stage of the tower, from which this doorway opens, is lighted by a narrow loop in the west wall, and by another in the south wall (pl. v, 2), each 6 inches wide at the sill. They are chamfered externally, and their semicircular heads are cut out of lintels. Their jambs are monoliths, slightly inclined. Internally the openings are splayed, and covered with stone lintels. There are two loops in the third stage, in the south and west walls, which are precisely similar, but are rather narrower and of less height. There are no openings in the north wall.

The plain lower stages of the tower finish with a chamfered string-course below the belfry stage, the wall-faces of which are set back slightly. The belfry

¹ The jambs of this doorway are not rebated, and its clear width is 2 ft. 9½ in.

² I am indebted to my friend Mr. C. R. Peers for pointing this out to me, and also for kindly examining Wharram church with me.

³ W. G. Collingwood in the *Yorkshire Archaeological Journal*, xxiii, 260.

windows (pl. v, 2) on each of the four faces are purely pre-Conquest in style. Each consists of two narrow openings, divided by a central shaft, with a tall cubic capital rounded down to the circular shaft, and without necking. This is a real 'mid-wall shaft', and supports a through-stone, hollow chamfered on its front and sides. The jambs have similar hollow chamfered imposts. The semi-circular heads of the lights are cut out of lintels. Flanking the jambs are narrow square pilaster strips, against which the imposts abut. The strips are finished above the imposts of the jambs with similar hollow chamfered imposts, and below they spring from the same form, inverted, corbel-fashion, above the level of the string-course. The arrangement and lack of finish of the pilaster strips suggest that they were designed to receive a semicircular strip enclosing the double opening, as in the tower of St. Mary Bishophill Junior, York.¹ Nothing remains actually to prove this suggestion, for the parapet and the hollow moulded corbel-course under it represent a much later reconstruction of the top of the tower.

The nave measures about 29 ft. by 15 ft. 10 in. within the walls, which are 2 ft. 6½–7 in. in thickness² and 17 ft. 2 in. in height from the floor to the under-side of the wall-plate of the modern roof. The east and west walls are original, and the ashlar masonry of part of the original external face of the north wall is still visible above the westernmost arch of the arcade which has been pierced through it. The original quoins remain at the north-east, north-west, and south-west angles. The south wall, except a width of 2 ft. 9 in. next the south-west angle, had been rebuilt before 1862, and its thickness reduced externally by about 6 inches, from about 1 foot above the top of the plinth upward. Externally this south wall, from the modern porch eastward, has a chamfered plinth, which is continued around the rebuilt chancel; it is difficult to imagine that this plinth does not represent original work, but it is certainly remarkable that there is no plinth to the original wall at the south-west angle, nor to that which remains at the north-west angle.³ The junctions of the masonry of the west wall with the tower prove that the nave and tower were built together.

The chancel measures 16 feet in length internally, and its original internal width was 12 feet, with walls of the same thickness as those of the nave. When the chancel was rebuilt about 1862, its north and south walls were reduced in

¹ Illustrated in Rickman (5th ed.), p. xxxix, and in the York volume of the Royal Archaeological Institute (1846), p. 18. Also by C. C. Hodges, *op. cit.*, *Reliquary*, viii, 202. This tower shows no specially Norman characteristics, and may well have been built in the time of Edward the Confessor.

² The north wall at the east and west responds of the arcade and the east wall at the chancel arch measure 2 ft. 9 in. in thickness including the plastering on each side.

³ At the north-east angle, the plinth of the fourteenth-century aisle is continued up to the north wall of the chancel.

thickness internally, and its internal width was thus increased. The rebuilt east wall has nearly its original thickness.

The walls of the nave and chancel are now plastered internally, though doubtless the original walls were ashlar-faced, like those of the tower. The south windows of the nave and all the windows of the chancel are modern, but, before the chancel was rebuilt, there was what seems to have been an original window in its north wall.¹ The only original architectural features of the nave and chancel which have survived are the south doorway of the nave and the jambs of the chancel arch.

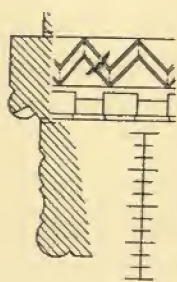


Fig. 5. Wharram-le-Street, arch of south doorway.

The south doorway of the nave has a clear width of 3 ft. 1½ in. The plan of its jambs is similar to that of the west doorway—square inner jamb with detached shaft in square recess—but the jambs are rebated and splayed internally: this may or may not be original. The doorway was severely mutilated in resetting when the south wall was rebuilt; it has lost its shafts and their bases, and the abaci of the capitals, while the capitals themselves and the outer order of the arch have been buried to more than half their depth in reducing the thickness of the wall. The capital of the lost shaft to the western jamb is carved with an angle volute similar to that of the northern capital of the chancel arch; the capital to the eastern jamb has a row of vertical leaves turned over at the top, very similar to those in the same chancel arch capital, but here without the angle volute; both capitals have neckings. The inner order of the arch is square-edged. The outer order (fig. 5) has the same profile as that of the outer order of the west doorway, with the addition of a flat roll beyond the quirked hollow, and the soffit has not been sunk.² The outer order is surrounded by a hood moulding of small projection, consisting of a flat face on which is a row of chevrons roughly incised with a sunk bead,³ below which is a small roll cut into billets.

The chancel arch, which is pointed of two chamfered orders, is of later construction, but the jambs are original. Their plan is similar to that of the jambs of the tower arch—square-recessed on the side next the nave, with a 7-inch detached shaft in the nook of each. The bases of the shafts have the Norman profile of a hollow above two or three rolls. The capitals (fig. 6)

¹ There is no trace of this window in the rebuilt wall, but it is shown on Messrs. Atkinson's drawings of 1862 as a single narrow light, about 6 in. wide and 2 ft. 10 in. high including its semicircular head, with chamfered external jambs, and with wide splays internally to the jambs, arch, and sill. The position of the window is indicated on the plan (fig. 1).

² Part of the quirk on the lower edge of the angle roll is visible over the east jamb.

³ In the Wold churches, the chevron seems to make its first appearance as decoration of a flat face, before it was used on the angles of arch-orders, etc.

are also of definitely Norman inspiration. That on the north side has a large angle volute, flanked on each side by two upright leaves turned over at the top. That on the south side has an angle volute with a smaller volute on each side, the stems of which spring from the necking, with which both capitals are provided. The abaci have the usual Norman profile of a quirked chamfer below a flat face, which is returned as an impost to the square jambs, but not on their east faces. On the chamfer of the impost over the south jamb, a sunk star ornament in two rows has been begun but never finished, only five stars in



North.

*J. W. Leedham, phot.*
South.

Fig. 6. Wharram-le-Street, capitals of chancel arch.

length being worked on a stone which is otherwise plain. The height of the jambs from the floor to the top of the abaci is 7 ft. 10 in., and the opening has a clear width of 7 ft. 1 in.

The font, which stands under the tower, is circular in plan, 2 ft. 6½ in. in diameter, with plain tapering side and a chamfered plinth, and may well date as usual from the completion of the church.

Although there is only one detail in the tower—the arch-mould of the west doorway—which can be pronounced to be distinctively Norman, this and the details which have just been described confirm the evidence of the structure itself that the whole church was one build, as indeed the plan itself indicates. The arch-moulds of the west doorway and of the south doorway are of the same type, and must be of the same date, and the same is true of the volute

and upright leaves on the capitals of the south doorway and on the northern capital of the chancel arch.

The church must obviously be dated, not by the archaic characteristics which have survived, but by its more advanced details. The arch-mould of the west doorway (of course without the sunk soffit) is found at Saint-Étienne, Caen, not in the earlier work of the nave, but in the arches of the doorways of the west front, which date from about 1080, and it occurs a few years later in the arches of the lower windows of the apse of Saint-Nicolas, Caen. At Lincoln, which is certainly derived from Caen, it is found in the arches of the recesses of the west front, which may date from about 1090. It is the arch-mould of the intersecting wall-arcade inside the choir aisles of Durham, begun in 1093, and of the ground-story arcade of the apse of Norwich, begun in 1096. It is therefore impossible that it could have made its appearance in a Yorkshire church which is otherwise so backward before the last decade of the eleventh century, and its date here is much more likely to be in the early part of the twelfth century. The volute capital with the row of upright leaves, on the north jamb of the chancel arch, derives from the characteristic Norman capital of which examples abound at Caen and elsewhere, which is reproduced in the crypt of Lastingham (1078-88). The Wharram capital, in its less close adherence to the Norman type and its finish, indicates a later date than that of the Lastingham capitals. The chevron and billets of the hood of the south doorway confirm the attribution of the church to the earlier years of the twelfth century rather than to the end of the eleventh.

Who was the builder of the church? Mr. Page thinks that there is 'probably enough evidence to show that in 1066 and for some little time before it had been a common practice for thegns and others to build churches on their demesne near their houses'.¹ Indeed, in this devastated region which was only beginning to recover from the Conqueror's harrying, there was no one who would be able to build the church but the landholder. That Herbert the chamberlain built the church of Weaverthorpe on his newly-acquired holding is fortunately certain from the record on the dial there, and we cannot doubt that Wharram was in like manner built by the holder of the manor. The Survey records that the manor of Wharram (12 carucates), which was then waste, was held in chief by Robert count of Mortain, the Conqueror's half-brother, and under him by Nigel Fossard,² who held 93 of the total number of about 215 manors which the count held in Yorkshire. When the count's lands were forfeited a few years later, Nigel became tenant of the Crown for the

¹ Wm. Page, *Some Remarks on the Churches of the Domesday Survey*, in *Archaeologia*, lxvi, 101.

² *Domesday Book* (Rec. Com.), i, 307 a.

lands which he had held under him,¹ and there can be no doubt that it was he who built Wharram church.

The Norman lords who built these churches, employing master-masons who were at first very imperfectly Normanized, generally endowed monasteries by handing over the churches to them. In this district it is clear that, before the arrival of the Cistercians, the regulars most favoured were those of the newly introduced order of Austin Canons. Weaverthorpe church was given by the sons of its builder to the canons of St. Oswald's, Nostell, apparently almost as soon as it was finished.² Robert Fossard, Nigel's son, possibly under the influence of their example, gave to Nostell the churches of Wharram, Bramham, and Lythe, to constitute a prebend in the church of St. Peter, York.³ Athelulf,⁴ the prior of Nostell, who became bishop of Carlisle in 1133, is said to have been the first holder of the prebend.⁵ The neighbouring church of Kirkby Grindalythe, which is only a little later than Weaverthorpe, seems to have been built by Walter Espec, and was given by him, with the church of Garton-on-the-Wolds, to his new foundation of Austin Canons at Kirkham,⁶ which he is said to have founded on the advice of his uncle William, the rector of Garton, who was a canon of Nostell and became the first prior of Kirkham.⁷ Charter evidences afford ample proof of the close association in public transactions of these lords with each other, and with the prior of Nostell.⁸ The significance of this connexion with Nostell will be apparent in the sequel.

¹ It has generally been assumed that Nigel died shortly after the completion of the Survey, and that it was his son Robert who became tenant-in-chief of the lands which his father had held under the count of Mortain; but Dr. Farrer has shown that there is evidence which indicates that Nigel survived until about the year 1120 (*Early Yorkshire Charters*, ii, p. 326; cf. p. 11).

² Farrer, *Early Yorkshire Charters*, i, nos. 26, 27; iii, no. 1439.

³ *Ibid.*, ii, no. 1012. The grant, which is not later than 1129, is attested by William the treasurer (son of Herbert the chamberlain), the future archbishop and saint.

⁴ The name appears in various forms: Athelulf, Adalulf, Adelulf, Aiulf, Adelwold, Adelwald, etc. Freeman (*Norman Conquest*, v, 230) calls him Æthelwulf, and says that the name is sure proof of his English birth. Mr. W. H. Stevenson however kindly tells me that names in *Adal-* and in *-ulf* were fairly common in France in the twelfth century, and he thinks that the prior was more probably a Norman or a Frenchman, as he had been the confessor of Henry I (*Robert de Torigni*, in *Chronicles of Stephen*, etc., ed. Howlett, iv, 123).

⁵ Le Neve, *Fasti* (ed. 1854), iii, 177. In February 1123, when William of Corbeil was elected archbishop of Canterbury, Athelulf was with archbishop Thurstan at the Gloucester court, and they spoke favourably to the king of the archbishop-elect; the messengers whom Thurstan sent to William about his consecration were the abbot of York, prior Athelulf, and 'certain of our archdeacons and canons' (*Hugh the Chanter*, in *Historians of the Church of York*, ed. Raine, ii, 199). Is it possible that the Bramham prebend had already been constituted, and that Athelulf was in attendance on Thurstan as one of his canons?

⁶ *Mon. Angl.*, vi, 208, no. 1; *Chartulary of Rievaulx* (Surtees Soc., 83), nos. 216 and 347.

⁷ *Mon. Angl.*, v, 280, no. 2.

⁸ Nigel Fossard and Walter Espec attested archbishop Thurstan's town charter to Beverley

The church of St. Rule (or St. Regulus),¹ St. Andrews (pl. vii), is one of the most interesting of the earlier churches of Scotland. In its present condition, its plan comprises only an oblong choir and a western tower. On the east face of the choir are the toothings of the side walls of a sanctuary, 15 ft. 10 in. wide internally.²

The choir measures 26 ft. 1 in. by 19 ft. 10 in. within the walls, which are 2 ft. 6½ in. thick³ and 31 ft. 9 in. high from the top of the plinth. The tower is about 20 ft. 6 in. square externally,⁴ and 108 ft. 4 in. high from the top of the plinth.

The masonry, of local sandstone,⁵ is of excellent character, of large squared stones, showing ashlar faces both externally and internally. The three courses above the plinth are each 21 inches high, above which the courses are about 16½ inches high. This large-stone technique may represent the megalithic tradition of pre-Conquest times, and the great relative height of the walls is a common characteristic of pre-Conquest building.

The choir opens eastward to the sanctuary and westward to the tower by lofty arches, to be described presently. It has two round-headed windows in each side wall, placed high up (about 14 feet to the sills), splayed all round internally, and with wide external splays or chamfers. Externally the round

[1115-28] (Farrer, *Early Yorkshire Charters*, i, no. 95). Walter Espec attested Henry I's general confirmation to the canons of Nostell [1121-27] (*ibid.*, iii, no. 1428, a doubtful charter in its present form), as well as another confirmation [1123 or 1127] (*ibid.*, iii, no. 1435). Archbishop Thurstan, Athelulf prior of Nostell, and earl David attested the king's letters of protection to Walter Espec's new foundation of Austin Canons at Kirkham [1122] (Farrer, *Itin. Hen. I*, no. 478). Athelulf prior of Nostell, and William treasurer of York and archdeacon of the East Riding, attested two of archbishop Thurstan's charters to the Austin Canons' house of Bridlington [c. 1125-33 and c. 1130-33] (*Early Yorkshire Charters*, ii, no. 1151; iii, no. 1367). Walter Espec attested a grant by Henry I for a prebend for William, treasurer of York [1133] (*ibid.*, i, no. 132). The dates within square brackets are those assigned by Dr. Farrer.

¹ For more detailed description and illustration than is attempted here, see Macgibbon and Ross, *The Ecclesiastical Architecture of Scotland*, i, 185 (plan, fig. 153, p. 186); D. Hay Fleming, *Handbook of St. Andrews* (1910), 87; and G. T. Rivoira in *The Burlington Magazine*, April, 1912. For illustrations, see also Sir G. G. Scott, *Lectures*, ii, figs. 203-5 (pp. 24-5); and J. Russell Walker, *Pre-Reformation Churches in Fifeshire* (1895).

² Professor W. Brown's description of St. Rule's in 1787 states that the foundations then visible of the 'choir' (as he calls it) indicated an internal length of 24 feet (*Bibliotheca Topographica Britannica*, no. xlvii, 206). The position of some foundation masonry discovered in digging a grave in 1892 (noted by Dr. Hay Fleming) has been thought to indicate an apse, but the evidence is scarcely decisive, and one would rather have expected a square east end.

³ As at Wharram.

⁴ The walls of the lowest stage appear to be 3 feet thick, which makes the internal measurement about 14 ft. 6 in. square, but the insertion of the modern staircase makes it impossible to measure this precisely.

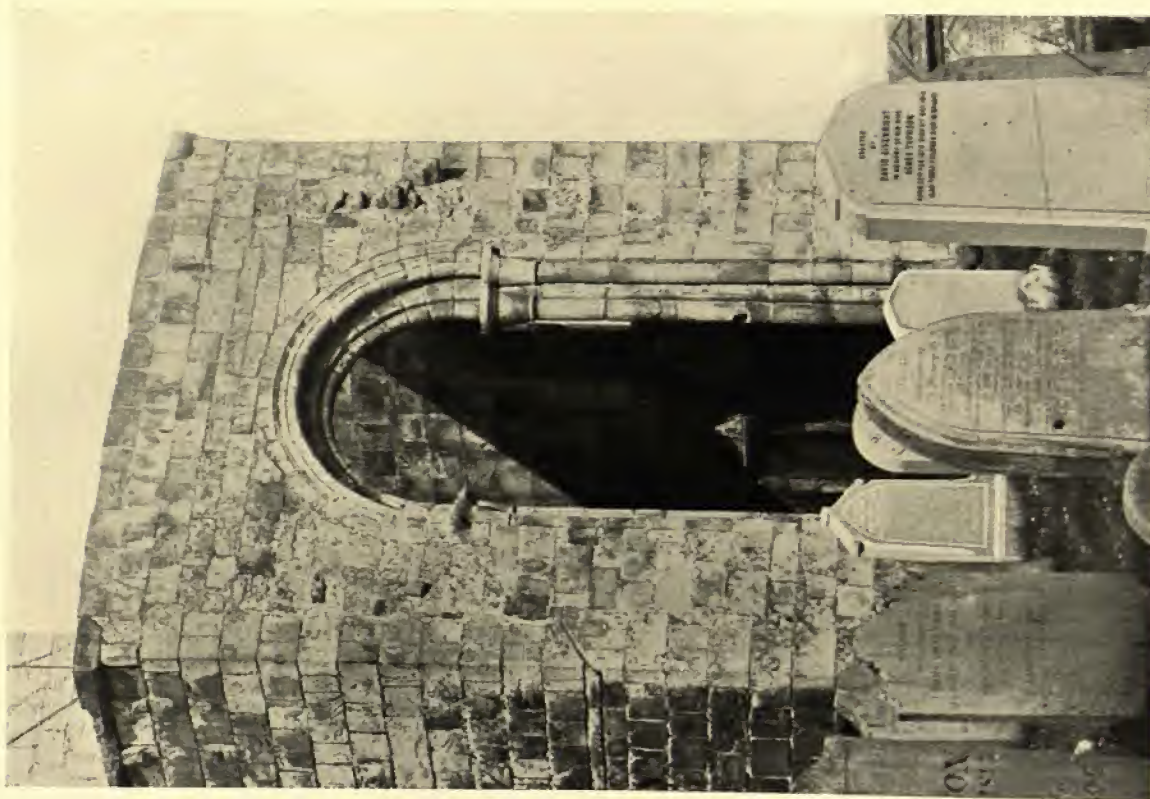
⁵ D. Hay Fleming, *Proc. Soc. Antiq. Scot.*, 5th ser., i, 232



G. Baldwin Brown, phot.

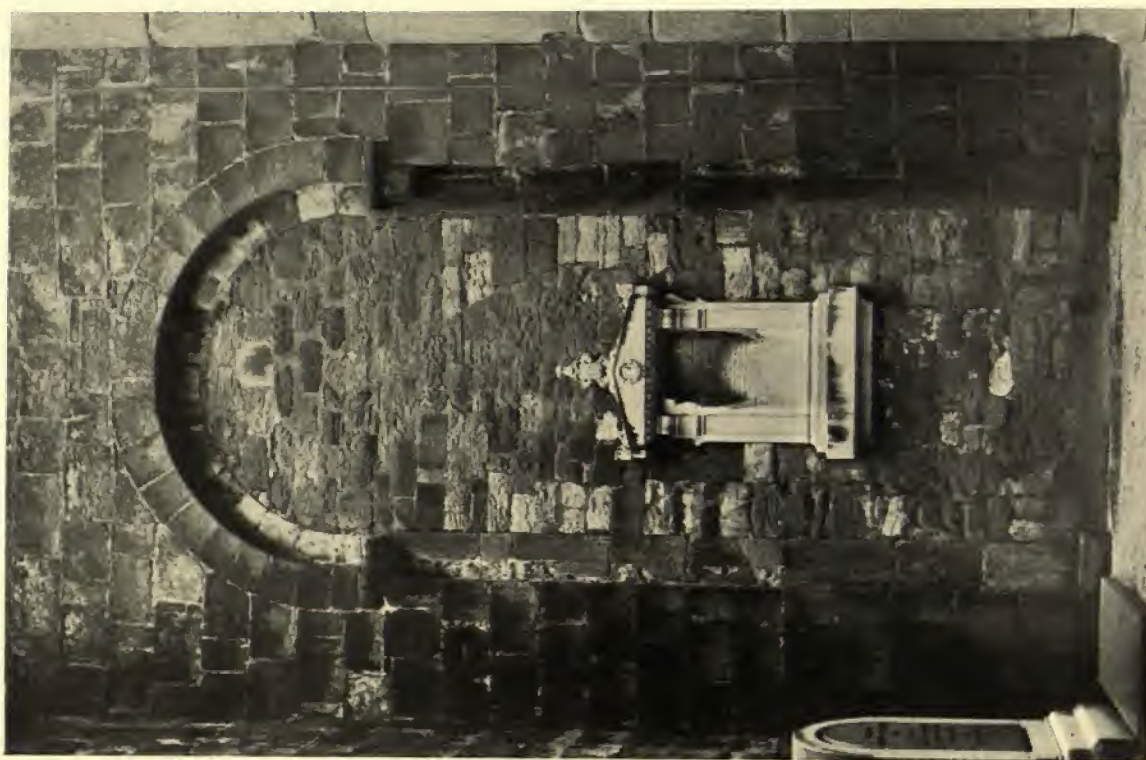
ST. RULE'S CHURCH

Exterior from south-east



1. East Arch of Choir

G. Baldwin Buxton, phot.



2. East Arch of Tower

ST. RULE'S CHURCH

Published by the Society of Antiquaries of London, 1924

heads are cut out of lintels. Internally the heads are constructed in a very curious fashion; the course above the springing is continued to and shaped to the arched line, as also is the second course, which has a keystone in the middle; the head is thus not a true arch, but corbel-construction with a keystone. The side walls are finished with a double-chamfered eaves-table, on hollow corbels—a motive of Norman inspiration.

The fact that this corbel-table is continued around the north, west, and south walls of the tower proves that, when the lower part of the tower was built, it was not intended to build anything to the west of it. The tall arch in the west wall of the tower seems to have been inserted after the ground story had been built, and its extrados cuts into the corbel-course; but the identity of its detail¹ with the arches which undoubtedly belong to the original building proves that the alteration must have been nearly contemporary, and indicates the addition to the original plan of a nave of which the only surviving trace is the roof-line on the west face of the tower.²

Above the corbel-table, the next four stages of the tower rise perfectly plain without string-course or set-off. In the east wall is the usual doorway opening into the roof-space of the choir, with its sill about a foot above the level of the tops of the choir walls. The windows of these four stages have semi-circular heads cut out of lintels. The jambs of the windows to the second and third stages are monoliths and inclined;³ those of the stages above are bonded and not inclined.

The base of the belfry stage is marked by a string-course, above which on each face is a window of two tall lights, divided by a shaft with a tall cubic capital rounded down to the necking of the circular shaft. The shaft supports a chamfered through-stone, and the jambs have had nook-shafts with chamfered abaci. The semicircular heads of the openings are cut out of lintels. These windows are of precisely the same type as those at Wharram (without the pilaster strips), but the nook-shafts are indications of more advanced character. Above the principal belfry window on each face is a single round-headed light, below the double corbel-table which now forms the finish of the tower.

¹ The inner order of this arch has the Norman profile of the outer order of the east arch of the choir, but the blocking of the opening makes it impossible to say whether it had the sunk soffit. The unmoulded outer order of shallow projection is found in some Yorkshire churches of the 'overlap' period: e.g. in the west doorways of Hovingham and Kirkby Grindalythe.

² The absence of any window on the western face of the second and third stages might be taken to indicate that the addition of a nave had already been undertaken before these stages of the tower were built, but for the fact that each of the four stages above the ground story is lighted by one window—on the south to the second and third stages, on the west to the fourth stage, and on the east to the fifth stage. These four stages have no window to the north.

³ As at Wharram.

The analogies between Wharram and St. Rule's which have been noticed above would not in themselves justify our going beyond the general conclusion that both towers represent the pre-Norman building tradition of the old Northumbria. The details now to be described warrant a much more definite conclusion.

The tall eastern arch of the choir (pl. VIII, 1) has a clear width of 9 ft. 1 in. and a height of 19 ft. 9 in. to the springing. The jambs are triple-shafted—recessed on each side of the wall, with a shaft in the nook of each,¹ and an attached shaft on a *dosseret* between them (fig. 7, i). The capitals of the shafts are of the same tall cubic type as those of the tower arch at Wharram, but without the triangles, and they have the archaic peculiarity that the small roll necking is worked a little above the bottom bed of the capitals. The abaci are chamfered, and their circular plan is remarkable. The profile of the inner order of the arch repeats that of the shafted jamb. The outer order has precisely the Norman profile² noticed in the west doorway of Wharram, with the same peculiarity of the sunk soffit. The arch-orders spring too far back over the capitals, and the arch is slightly horseshoed.³

The arch which opens from the west end of the choir through the east wall of the tower (pl. VIII, 2), now walled up, has a clear width of 9 ft. 7 in., and a height of 21 ft. 3 in. to the springing. The shafts and their bases have disappeared, and only part of one capital remains on the north jamb (fig. 8), of the same detail as those of the eastern arch of the choir. With these exceptions, every detail of this archway exactly repeats what is found in the tower arch at Wharram. The plan of the recessed jamb with detached nook-shaft (fig. 7, ii) is the same. The profile of the abaci, with a large hollow chamfer beneath a flat face, and of the imposts to the inner faces of the opening, is the same, with the same peculiarity that the imposts are not returned on the east face. The jambs are inclined in the same manner, the width of the opening being 4 inches less beneath the imposts than at the base of the jambs. The arch has the same two square-edged orders next the choir, which have the same unusual construction in two vertical rings; the joints of some of the voussoirs are not radiated correctly, and some in the inner order slope downwards towards points below the centre of the arch-curve; the outer order springs too far back over the capitals; and the arch is horseshoed.

¹ These nook-shafts are partly detached, and partly attached and bonded.

² The profile of this order and the jamb plan are distinctively Norman, and prove that the church cannot have been built before the time when Norman influence began to affect the architecture of Scotland. These details alone sufficiently disprove the preposterously early dates to which some writers have assigned the church.

³ Some of the voussoirs are jointed in the normal way, but others have the peculiar jointing in vertical rings noticed at Wharram.

The identity of these details, some of which are decidedly unusual, prove that either the English master-mason who built the tower of Wharram, or one of the group to which he belonged, must have been employed in the building of St. Rule's. This conclusion receives interesting confirmation from what is known of the historical associations of the bishop who built the church.¹

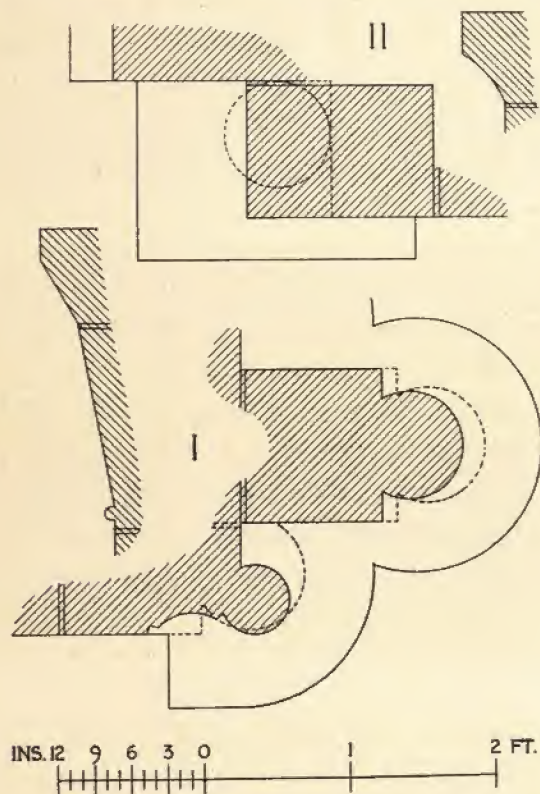


Fig. 7. St. Rule's: I, east arch of choir; II, east arch of tower.

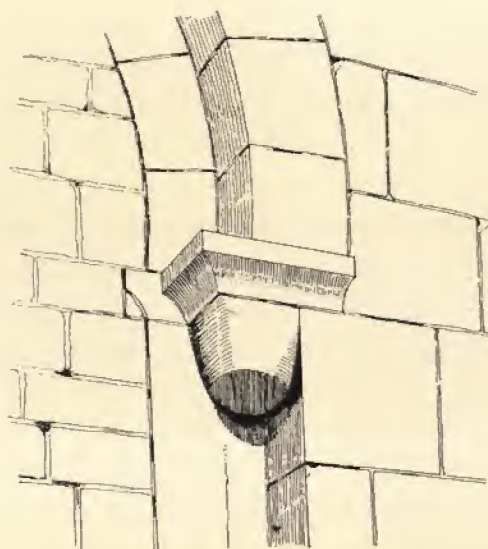


Fig. 8. St. Rule's: east arch of tower, east face.

In the course of the ecclesiastical reforms for which the sons of St. Margaret are famous, king Alexander established canons regular at Scone,² whom he brought from Nostell. In his charter (*c.* 1120?) the king says that, 'in order to extend and exalt the worship and honour of God, it has pleased us to request sir Adeluald the prior (to send us) some of the canons who are serving God in the church of St. Oswald, the good report of which as regards religion has become known to us by the honourable advice of upright men'.³ One of the

¹ Dr. Joseph Robertson in 1849 seems to have been the first modern antiquary to date St. Rule's correctly (*Quarterly Review*, lxxxv, 120).

² In 1114, according to Bower's *Scotichronicon* (ed. Goodall), i, 286. In 1115, according to the *Chronica de Mailros* (Bannatyne Club), 65.

³ *Liber Ecclesiae Sancte Trinitatis de Scon* (Bannatyne Club), 1; Lawrie, *Early Scottish Charters*, no. 36. Lawrie (p. 280) regards this charter as spurious, though he admits that Alexander's foundation

canons brought from Nostell was Robert, who became the first prior of Scone.¹ Shortly before king Alexander's death (25th April 1124), he caused Robert to be elected bishop of St. Andrews.² After some considerable delay, Robert was eventually consecrated by archbishop Thurstan without profession, either in 1126 or 1127.³

A thirteenth-century 'Legend of St. Andrew'⁴ relates how bishop Robert built the church and established canons regular at St. Andrews. 'The bishop, after his consecration and his return to his own see, set himself zealously to accomplish what he had much at heart—the enlargement of his church and its dedication to divine worship.'⁵ It is perhaps hazardous to interpret too literally a text which is obviously corrupt in places, but the mention of 'enlargement' does seem to suggest the possibility that, during the period between his election and consecration, the bishop had already begun the building, and that, after his consecration, he decided to expand his original plan by the addition of a nave, which, as we have seen, is indicated by the arch in the west wall of the tower. However this may be, the 'Legend' goes on to relate that, since the sums paid in were modest, the erection of the building was proceeding on a small scale (*sed quoniam impensa erant modica, modice erigebatur et fabrica*), until with king David's encouragement more money came in, and the bishop was able to progress more rapidly with the work. When the church was for the most part

of 1114-5 is probable; but one of his reasons for rejecting it is certainly unsound, viz. that Athelulf did not become prior of Nostell until 1128, and that Alexander cannot have brought canons from Nostell so early as 1115 because it was not then a house of canons regular. See the Rev. James Wilson's article on the *Foundation of the Austin Priories of Nostell and Scone*, in *The Scottish Historical Review*, vii, 141, with his conclusion that there need be no hesitation in accepting king Alexander as the founder of Scone, and acknowledging prior Athelulf's co-operation with him in establishing the Augustinians in Scotland. The notification by archbishop Thomas II of an agreement between the monks of La Charité and the canons of St. Oswald (Farrer, *Early Yorkshire Charters*, iii, no. 1465) proves that canons regular were established at Nostell before the archbishop's death in 1114.

¹ Fordun (*Chronica gentis Scotorum*, ed. W. F. Skene, i, 227) simply says that canons were brought from Nostell. Bower's *Scotichronicon* (ed. Goodall, i, 316) says that six canons were brought from Nostell, with the consent of prior Athelulf, and that Robert was one of them.

² Four months before his death, according to Symeon of Durham (*Historia Regum*, ed. Arnold, ii, 275), probably after the news of Eadmer's death (13th January 1124) had reached the king (Dowden, *The Bishops of Scotland*, 4).

³ Not later than 17th July 1127, when Robert issued his charter to Coldingham (Raine's *North Durham*, appendix, no. 446; Lawrie, *Early Scottish Charters*, no. 73). The name of 'Adulfus' or 'Adelof' prior appears among the witnesses to the 'without prejudice' letters which archbishop Thurstan and king David exchanged at the time of Robert's consecration (*Historians of the Church of York*, ed. Raine, iii, 51, 52).

⁴ *Chronicles of the Picts, Scots, etc.*, ed. W. F. Skene, 191.

⁵ 'Ordinatus igitur episcopus, atque ad sedem propriam reversus, quod anhelabat in pectore, exercere studebat in opere, ut ecclesia, viz. ampliaretur, et cultui divino dedicaretur.'

finished, and the claustral buildings were sufficiently advanced, the bishop begged Athelulf (who was now bishop of Carlisle but still retained his priorate of St. Oswald's¹), as a favour to the king and himself, to send a suitable person from his old house at Nostell, to be appointed as prior over the canons whom he was establishing at St. Andrews. The new priory was evidently fully established when bishop Robert issued his charter to it in 1144.²

There is therefore no need for surprise that bishop Robert should have brought to St. Andrews a mason who had recently built a church which had just been, or was about to be, given to the house of canons from which the bishop originally came. King David was the brother-in-law of Henry I, and his wife was a daughter of the English earl of Northumbria and the widow of the Norman earl of Northampton. Before his accession to the Scottish throne, David had spent most of his time at the English court, and as earl of Cumbria had ruled the district in which the prior of Nostell was later to find his see. He was thus brought into close touch with the northern barons and ecclesiastics, and with the newly introduced order of Austin Canons. In 1122 he was at the king's court at York, and with archbishop Thurstan and prior Athelulf attested the royal letters of protection to Walter Espec's new foundation of Austin Canons at Kirkham.³ He attested one of king Henry's earliest charters to Nostell,⁴ and after his accession we find his name among the benefactors of his sister's foundation of Austin Canons of Holy Trinity, Aldgate,⁵ and of the canons of Nostell.⁶ His stepson Waldef became a canon of Nostell, and later the prior of Kirkham.⁷ 'He encouraged the presence in his kingdom of settlers from England, both of Norman and of Old-English blood.'⁸ Bishop Robert, therefore, was only following the same tendency when he brought to the building of St. Rule's a master-mason from Northumbria who was still working for the most part on the old English lines, with a very superficial assimilation of Norman detail. So also king David himself later brought to the building of the church of his mother's foundation of Dunfermline a master from Durham, which represents the summit of Norman achievement. We can thus the better understand how two such widely different works as St. Rule's and Dunfermline came to have been built in the same generation.

¹ Athelulf only resigned his priorate of Nostell shortly before his death in 1155 or 1156 (Farrer, *Early Yorkshire Charters*, iii, nos. 1473 and 1474).

² *Liber Cartarum Prioratus Sancti Andree in Scotia* (Bannatyne Club), 122; Lawrie, *Early Scottish Charters*, no. 162.

³ See note 8, p. 65 *supra*.

⁴ Farrer, *Early Yorkshire Charters*, iii, no. 1427 [1121-2].

⁵ *Mon. Angl.*, vi, 152, no. 5 (attested by Walter Espec).

⁶ Farrer, *Early Yorkshire Charters*, iii, no. 1464 (attested by Athelulf, bishop of Carlisle).

⁷ F. M. Powicke, *Ailred of Rievaulx*, 53.

⁸ Freeman, *Norman Conquest*, v, 257.

The story of the churches of Wharram and St. Rule leads therefore to two conclusions of some importance to the architectural history of Britain in the earlier part of the twelfth century: (1) that some forty years after the Conquest an English mason employed by a Norman lord built a church which followed to a great extent the building-tradition of pre-Conquest times, with a tower in which only a single detail can be pronounced to be of distinctively Norman inspiration; and (2) that this Englishman, or one of his colleagues, took a leading part in the building of one of Scotland's most important surviving monuments of the earlier years of king David's reign.¹

¹ I have to express my thanks to the friends who have kindly contributed the photographs which illustrate this paper; to Mr. J. V. Saunders for those of Wharram-le-Street, except the chancel-arch capitals, which I owe to Mr. J. W. Leedham; and to Professor G. Baldwin Brown for two photographs of St. Rule's. I have also to thank Dr. D. Hay Fleming for kindly giving me the benefit of his intimate knowledge of St. Rule's, and the Rev. William Dale, vicar of Wharram, for his kindness in affording me every facility for the examination of his church.

III.—*Lettered Egyptian Textiles in the Victoria and Albert Museum*, by
STEPHEN GASELEE, Esq., C.B.E., M.A., F.S.A.

Read 22nd March 1923.

THE textile is not a wholly suitable material to receive lettering, at any rate in our Western angular alphabets; the stitches have to be very fine to preserve satisfactorily the characteristic forms of letters, and it seems difficult to work a word or sentence satisfactorily into the design. In the best ages of Western ecclesiastical embroidery, texts from Scripture and prayers were avoided; we may find the name of a saint, especially if his attribute is not very obvious, and, more often, the sacred monograms IHC and XP (✝). In later times examples of lettering in needlework, most familiar to us Englishmen in the 'sampler', usually seem to have something of the bizarre about them.

The art of drawing came to maturity before the art of writing, and it is therefore in very early days the former that helps the latter (e. g. the use of the determinative in the ancient Egyptian hieroglyphic script) rather than vice versa: and in general the extent to which the ancients 'labelled' their pictures is outside the scope of this paper. Their deities were furnished with attributes as individualizing as those of our saints, so that a description in words of a statue or portrait of a god would ordinarily be unnecessary; but there was no essential objection to such an assistance to the eye, and on Greek vases for instance, where more or less elaborate scenes are portrayed, it is not uncommon to find names annexed in order to distinguish the different characters. When we come to the art of Christian Egypt, we no longer have the highly individualized deities of the old times, recognizable at once by a beast's or bird's head, or some emblem worn or borne, or the members of the Greek Pantheon similarly identified by symbol or emblem; and it is not surprising that we sometimes find a name attached to a figure otherwise dubious. Thus on a memorial tablet¹ in the British Museum are represented two military saints on horseback facing a central cross,

¹ Eighth or ninth century, from Sohag. H. R. Hall, *Coptic and Greek Texts of the Christian Period*, 1905, pl. xci.

with the names ΔΕ[ΙΟΣ] ΠΑΝΕΝΕ and [Δ]Ε[ΙΟΣ] ΕΠΙΤΩΡ, and many of the *ampullae* from the shrine of St. Menas in the Libyan desert bear the words Ο ΔΕΙΟΣ ΜΗΝΑΣ :¹ or to turn to manuscripts, a papyrus volume² of A. D. 914 in the Pierpont Morgan collection has a frontispiece representing the Annunciation, in which above the Blessed Virgin's head are the words ΔΕΙΑ ΜΑΡΙΑ ΤΗΔΡ, and above the Angel's ΕΑΒΡΗΛ ΕΓΓΕΙΜΕΝΟΣ ;³ and the unique Nubian manuscript in the British Museum has a picture⁴ of St. Menas on horseback with a spear, riding down the wicked boatman who had eaten the egg that should have been offered at the saint's shrine,⁵ with the words ΔΕΙΟΣ ΜΗΝΑΣ above the three crowns that hover over his head. So a frontispiece to a volume of the *Acts of St. Mercurius*⁶ shows him killing Julian the Apostate, with the legend Ο ΔΕΙΟΣ ΜΑΡΚΟΥΡΙΟΣ ΣΤΡΑΤΗΛΑΤΗΣ ; and I need adduce no more examples of such descriptive titles⁷ in illuminations, for they are common enough.

Turning now to textiles, we have little from the Greek world outside Egypt ;⁸ but sufficient from Greek Egypt to show that a name describing a figure was not rare.⁹ The descriptions in the printed cloths¹⁰ in the Berlin Museum with scenes from the lives of Daniel and St. Peter¹¹ are elaborate and even detailed, each church in the representation being given the name of the saint of its dedication.

I now begin a brief account of the textiles¹² in the Victoria and Albert

¹ e. g. Budge, *Texts relating to Saint Mena of Egypt*, 1909, pl. i.

² Check list of Coptic manuscripts in the Pierpont Morgan Library, 1919, frontispiece ; cf. pl. iv, the frontispiece to a volume of A. D. 893, a Virgin and Child, in which monograms each side of the Virgin's head read ΜΡΑ ΜΡ ΙΩ ΧΩ.

³ i. e. ΕΓΓΕΙΜΕΝΟΣ, 'the Annunciator'.

⁴ Budge, *op. cit.*, facsimile of fol. 10^a of the MS.

⁵ Griffith, *The Nubian Texts of the Christian Period*, Berlin, 1913, p. 14 ; or my *Stories from the Christian East*, 1918, p. 37.

⁶ R. de Rustafjaell, *The Light of Egypt*, 1909, pl. xl : the probable date of the MS. is A. D. 985. Pl. xlviii, *ibid.*, shows the end of a sermon on the Blessed Virgin by St. Epiphanius of Cyprus, dated A. D. 990, with a figure of the preacher in place of a colophon, and ΕΠΙΦΑΝΙΟΣ ΠΠΙΣΚΟΠΟΣ on either side of his halo.

⁷ Sometimes even without a proper name, as a picture in the Vatican *Apophthegmata* (Zoëga clxix) of a bearded monk 'standing to prayer' with the words ΟΥΔΑΛΛΟ ΕΓΥΛΗΛ. See Zoëga's pl. vii.

⁸ But see no. 11 below, which may be Asiatic.

⁹ As for the COACINNIOS (in silk on linen) shown in Dreger's *Künstlerische Entwicklung der Weberei*, Vienna, 1904, *Tafelband* i, pl. 27, the texture—particularly the narrow band of silk tapestry—suggests early Arab times, though the form of the Greek letters looks early. For the story of St. Sisinnios or Sousinnios, and for many references to recent literature on these Coptic horsemen-saints, see Professor Perdrizet's *Negotium perambulans in tenebris*, Strasbourg, 1922.

¹⁰ Of the same class as those which make up no. 7 below.

¹¹ See Strzygowski, *Orient oder Rom*, pls. iv, v.

¹² I cite the numbers of the pieces from Mr. A. F. Kendrick's *Catalogue of textiles from burying-*

Museum on which anything approaching Greek or Coptic lettering is to be found.

(1) Mr. Kendrick's *Catalogue*, no. 51. On a square panel, tapestry-woven in coloured wools and undyed linen thread, is a central circle, within which is a half-length figure, holding a cornucopia in the left hand, and some kind of stem, with leaves on either side, in the right. Above the head is the word ΠΑΝΟΣ; and the figure may represent Pan, though hardly in his usual form, or connect the panel with Panopolis, which was called ΠΟΛΙΣ ΠΑΝΟΣ in Coptic,¹ or ΠΑΝΟΣ *tout court*. The *provenance* of the piece is unknown, but it may be ascribed to the fourth or fifth century.

(2) *Ibid.*, no. 52. A square panel, tapestry-woven in coloured wools with a half-length figure of Hermes, in chlamys and petasus, carrying the caduceus in his left hand and a purse in his right. On either side of his head, which is surrounded with a large yellow halo, are the letters ΕΡ ΜΗΣ. This is of about the same date as the last, and was found at Akhmim.

(3) *Ibid.*, no. 53. This much resembles the last, and is of the same date and *provenance*; a half-length figure of Apollo, with a lyre at his side. The left-hand top corner is damaged; on the other side of the head (which is again surrounded with a yellow halo) are the letters ΛΩΝ, clearly the second half of the name ΑΠΟΛΛΩΝ. Mr. Kendrick points out that this and the last resemble in style, colour, and texture two roundels² found at Akhmim by Bock in 1888; one contains a female bust with the uraeus on a solar disc upon the head, and is inscribed ΓΗ, while the other has a figure inscribed ΝΕΙΛΟΣ. In direct descent from these come two panels of the Besselièvre sale (Paris, 21 December 1911), nos. 39 and 40. A male and female figure in roundels within square panels are inscribed respectively ΓΕΩΡΓΕ and ΣΟΦΙΑ.³

(4) *Ibid.*, no. 309, a tapestry-woven cloth from Akhmim of the fifth century,

grounds in Egypt, of which vols. i (1920), ii (1921), and iii (1923) have now appeared. I owe much help to Mr. Kendrick in the preparation of this paper, and all the photographs with which it is illustrated. Reference should be made to his study of the forms of Christian emblems, other than lettering, on Egyptian textiles, dealing especially with those in the Victoria and Albert Museum, in the *Festschrift* (p. 100) just published in Vienna in honour of Professor Strzygowski.

¹ Crum, *Catalogue of the Coptic MSS. in the British Museum*, 1905, pp. 231-2; or von Lemm's *Das Triadon*, St. Petersburg, 1903, stanza 312.

² W. Bock, *Coptic Figured Textiles* in vol. iii of the *Transactions of the Eighth Archaeological Congress of the Imperial Archaeological Society*, Moscow, 1897, pls. xvi-xxi. The first of these was in the Hermitage, when last heard of, and the second in the Golenishchev collection, which is said to have been ceded to the Russian Government.

³ Perhaps of an earlier age, but in another line of descent, are the standing figures in wool-work in the Berlin Museum, with the descriptive lettering ΠΑΥΛΟΣ and ΠΕΤΡΟΣ over their heads, described by Strzygowski, *op. cit.*, p. 114, fig. 45. This looks like fifth-century work; the Besselièvre panels would be of the sixth or seventh century.

contains no lettering in the strict sense, but a row of four *ankhs*, within the second of which is the monogram ⲙ (fig. 1).

(5) An equally brief mention may be made of *ibid.*, no. 317, tapestry-woven ornaments on a linen curtain, again from Akhmim and of the fifth century. A winged figure bears a floral wreath within which is a jewelled cross; in the angles of this are the letters ⲁ and ⲱ.



Fig. 1. Tapestry-woven cloth from Akhmim, fifth century.



Fig. 2. Tapestry-woven *ankh*, fourth or fifth century.

(6) *Ibid.*, no. 326, is a tapestry-woven *ankh* stitched to a linen cloth; it is from an unrecorded site, and of the fourth or fifth century (fig. 2). It will be observed that the letters within the *ankh* read upwards, forming the word ⲧⲁⲛⲟⲗⲗⲱⲛ. Coptic proper names (and those of Greek Egypt generally) still await a full investigation. We sometimes find as a woman's name a Greek word with the feminine Coptic definite article prefixed, ⲧⲉⲧⲣⲉⲛⲓⲁ,¹ ⲧⲉⲥⲟⲫⲓⲁ,² ⲧⲉⲧⲭⲁⲣⲓⲥ,³ and often the name of an Egyptian deity preceded by the possessive article (ⲛⲓ ⲧⲟⲩ . . .) such as ⲧⲁⲛⲉⲥ⁴ (Thais), ⲧⲁⲣⲁⲙⲓ,⁵ ⲧⲁⲣⲱⲣ,⁶

¹ Crum, *Rylands Coptic MSS.*, 1909, no. 165.

² Lefebvre, *Rec. des Inscriptions grecques-chrétiennes d'Égypte*, 1907, nos. 261, 287; Hall, *op. cit.*, pl. lxvi, no. 2.

³ Hall, *op. cit.*, pl. xxv, no. 2.

⁴ Crum, *Rylands Coptic MSS.*, no. 310; Lefebvre, *op. cit.*, no. 137 (ⲥⲁⲛⲉⲥ).

⁵ Hall, *op. cit.*, pl. viii, no. 1.

⁶ Lefebvre, *op. cit.*, no. 676; Crum, *Rylands Coptic MSS.*, no. 394.

ταμιν.¹ ταπολλων may be of either of these two grammatical forms: if the name of Apollo is compounded with the definite article, compare τησθα² and even τηστε,³ 'the goddess'; if it is the possessive article with the two *alphas* coalescing, we may compare ταμινε,⁴ and ταπολλων will be the Egyptian equivalent of 'Απολλωνία. I suppose ταπολλων to be a pagan name, or at any rate compounded from 'Απόλλων, the god; the frequent Coptic (Christian) name is always απολλω (or απολω) without the final *u*, and appears to descend from Apollos,⁵ which is so transliterated in the Coptic versions of the New Testament.⁶

(7) Before leaving Akhmim and the fifth century, I have to make mention of the blue 'resist prints', of which Strzygowski treated on pp. 104 *sqq.* of *Orient oder Rom*, under the name of 'Der Reinhardtstoff'; and I can deal with them the more shortly in that they are already known to the Society by Mr. Lethaby's paper given on 23rd May 1912 (*Proceedings*, vol. xxiv, pp. 286 *sqq.* In this will be found reconstructed drawings of the three pieces which I am next about to mention). There are five of such pieces with lettering at South Kensington: 7

(a) and (b), *Catalogue*, nos. 785 and 786, are an Annunciation and a Nativity respectively; in the first, between the Blessed Virgin and the Angel are the letters $\begin{smallmatrix} \alpha\alpha \\ \rho\tau \\ \alpha \end{smallmatrix}$; in the second to the left of the attendant Angel is the monogram $\begin{smallmatrix} \rho \\ \alpha \end{smallmatrix}$ and to the right of the Virgin's head $\begin{smallmatrix} \alpha\alpha\rho\iota \\ \alpha \end{smallmatrix}$.

(c) *Ibid.*, no. 787, contains several scenes; in the upper left-hand part what may very probably be a fragment of the healing of the dropsical man; on the

¹ Forrer, *Die frühchristlichen Alterthümer aus . . . Achmim*, Strasburg, 1893, pl. xiv. In this case too the name, with an epithet, is within an *ankh*, thus:

i. e. 'Tamin the younger'. In the same plate Forrer shows other *ankhs*, containing the monogram $\begin{smallmatrix} \rho \\ \alpha \end{smallmatrix}$, and the $\begin{smallmatrix} \rho \\ \alpha \end{smallmatrix}$ with α and ω within the two side angles.

² Hall, *op. cit.*, pl. xvii, no. 1.

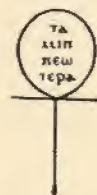
³ Crum, *British Museum MSS.*, no. 1223; Grenfell and Hunt, *Amherst MSS.*, no. 72 (Τινούτις); cf. the masculine name $\begin{smallmatrix} \alpha\alpha\alpha\alpha\tau\epsilon \\ \alpha \end{smallmatrix}$ Πίνουτι in Crum, *British Museum MSS.*, nos. 1085, 1079.

⁴ In the same document as $\begin{smallmatrix} \alpha\alpha\alpha\alpha\alpha\alpha \\ \alpha \end{smallmatrix}$ (see note 1) above.

⁵ 'Απολλώς is presumably a shortened form of 'Απολλώνιος, as Lucas is of Lucanus. 'Apollo' was an occasional name in England (e. g. one of the uncles of Samuel Pepys, early in the seventeenth century, was so called). Was this after Apollos or the Greek deity?

⁶ Except in the Bohairic version of *Acts* xviii, 24, and xix, 1, which follows, like the Armenian version, the corrector of $\begin{smallmatrix} \rho \\ \alpha \end{smallmatrix}$ and a couple of minuscules in reading $\alpha\alpha\epsilon\lambda\lambda\alpha\alpha\epsilon$ and $\alpha\alpha\epsilon\lambda\lambda\alpha\alpha\epsilon$.

⁷ A discussion of the character of the 'resist' process and of the critical passage in Pliny (*H. N.* xxxv, 42) will be found in the third volume of Mr. Kendrick's catalogue, pp. 60 *sqq.*



upper right hand Moses receiving the law on Mount Sinai, with the lettering ^{μο}τση; below on the left a female profile in a medallion labelled ^{εμα}ρωε;¹ and below on the right a fragment of the raising of Lazarus, with the letters ^αλαζ[αρο]ε.

(d) *Ibid.*, no. 789, part of a 'Communion of the Apostles', showing three standing figures, labelled:

οω	μαρ	πε
μα	κος	τρο
ε		ε

(e) *Ibid.*, no. 788, has not yet been satisfactorily explained. A figure with a halo stands in the centre looking round at another figure, with outstretched hand. Above the halo of the first is the drapery of a third figure, of which almost the whole head has perished; and below this, to the right of the main

figure, the letters ^{ει}οτ.
^εαα. I am inclined to see in this fragment a representation of

the Betrayal, applying the lettering to the uppermost figure: Judas² is then pointing out Christ (the main figure) to the band come to arrest Him; and in this case the figure on the left with outstretched hand will be the foremost of the party, in the act of apprehending Him. It may fairly be objected to this interpretation that the uppermost figure has what may quite probably be the remains of a halo; to which I would reply that Judas was at any rate occasionally so represented in the middle ages in the West; see for example a woodcut of the Betrayal on leaf 14^b of St. Bonaventura's *Meditatione sopra la passione del nostro signore*, printed at Venice in 1487 by Geronimo and Cornelio di Sancti:³ I have not sufficient knowledge of representations of the Betrayal in the art of the East to quote examples of the Traitor with or without a halo.

(8) I now leave the dyed linen fabrics and return to *ibid.*, no. 329, Oxyrhynchus, fifth or sixth century, which is a band, tapestry-woven in coloured wools on woollen warps, with a narrow yellow and a broad purple stripe at the top and bottom. Between these in yellow on a red ground:

ΩCICAMY
ΔΙΑΙCΔΑΠΑ
ΚΑΙΤΗCΓΥΝΑΙ
ΚΝΩΝΕΠΑΓΑΘ

¹ i. e. ἡ αἰμορροῦσα of *St. Matthew* ix, 20. The corruption of spelling may be compared with our *emerods* = haemorrhoids.

² ει for ι is not uncommon in Coptic, especially as representing semi-consonantal γ: ειωραπισ, ειωσινφ.

³ R. Proctor, *Index to Early Printed Books* . . ., London, 1898, no. 5180; D. Reichling, *Appendices ad Hainii-Copingeri Repertorium Bibliographicum*, Fasc. iii, Munich, 1907, no. 843. There are copies of the book in the Bodleian Library, Oxford, the Bibliotheca Casanatensis at Rome, and the Library of the University of Pennsylvania.

It is difficult to make anything of this fragmentary sentence. With all the diffidence in the world I suggest that it may be pagan, and be connected with an offering by some one with a name ending in *-ōsis* (common in Egypt), thus:

... ὥσις ἀμν[νόμενος τὸν
Διὰ ἰς¹ δαπά[νην αὐτοῦ τε
καὶ τῆς γυναι[κὸς καὶ τῶν
τέκνων ἐπ' ἀγαθ[ῶ

(9) *Ibid.*, no. 330: El A'zam, probably of the sixth century. The end of a cloth or scarf, woven in straw-coloured silk and yellowish wool; a plain narrow band is embroidered in blue and red wool with the words ΖΗCΕΤΑΙ ΚΑΙ ΔΟΘΗCΕΤΑΙ ΑΥΤΩ ΕΚ ΤΟΥ ΧΡΙCΙΟΥ² ΤΗΣ ΑΡΑ[ΒΙΑC (Psalm lxxi [lxxii], 15).

(10) *Ibid.*, no. 331. Site unrecorded, sixth or seventh century. A black woollen veil with three bands of weaving in light yellowish silk threads forming a Coptic inscription. Most of it has perished; but there can still be made out ΠΠΟ[ΥΤΕ ΙC ΠΕΧΥΙ (?) ΕΚ and ΩΠΕΕ, so that it doubtless contained the words 'God, Jesus Christ'. We may compare with this no. 268 in the Brussels collection,³ a red woollen strip, probably of the seventh century, on which, above a band of decorative design, are the letters ΠΠΟΥΤΕCΘΟΥ⁴ ΨΑΛΗΝ.

(11) *Ibid.*, nos. 794-801. These portions of panels of woven silk from the sleeves of linen tunics (probably from Akhmim, sixth century) would appear to be Alexandrian work, or may even have been woven in Hither Asia. Strzygowski favours Hither Asia; the influence must be from that quarter, even if the actual manufacture was at Alexandria. The silk is violet in colour and represents a horseman attacked by a spearman on foot. Above is the name ΖΑΧΑΡΙΟΥ. Forrer, *op. cit.* (see p. 77, note 1), figures this piece in his plate xvi, and another similar fragment—seen from the reverse side—with the letters ΙΩCΗΦ. We do not know the significance of these names; they may represent the rider, or be the names of officials.

(12) *Ibid.*, no. 722. A tapestry-woven shoulder-band in coloured wools and linen thread, from Akhmim, sixth to eighth century, consists of four compartments, one of which contains a standing nimbed figure with the letters ΙΟΥCΤΟΥ.

¹ i. e. *els*.

² The second Ι of ΧΡΙCΙΟΥ (*χριστοῦ*) is tall and out of shape at the top, so that the word appeared to be *Χριστοῦ*. It is due to the acumen of Professor Strzygowski on a recent visit to England that the quotation was identified.

³ I. Errera, *Collection d'anciennes étoffes égyptiennes*, Brussels, 1916. Other textiles with lettering at Brussels are nos. 234, 349, 422. The first and third seem to be 'conventionalized' (see nos. 13 sqq. below); the second cannot be read in Madame Errera's reproduction.

⁴ i. e. ΠΠΟΥΤΕ CΘΟΥ^Δ (an expression midway between the Northern and Southern dialects) 'the good God'.

(13) *Ibid.*, no. 719. A tapestry-woven piece from Qarāra near El Hibeh, sixth to eighth century, contains one roundel complete and part of another (fig. 3). The first contains a nimbed figure seated; on either side stand two more figures, one without a nimbus and one nimbed, both with hands uplifted over the seated figure's head, as if blessing. In the background are the letters ΑΡΧΙΑΛΕΩΣ. The second roundel contained below at least two figures, of which parts of the heads are visible, and above this what appear to be the arches of a building, with lettering . . . Μ . . . ΠΑΡΑΣΤΑΤΟΥ ΑΡΧΙΑΛΕΩΣ. The subject of this piece is anything but clear. The story of 'Archelides and his mother' is hardly



Fig. 3. Tapestry-woven cloth from Qarāra, sixth to eighth century.

so early as this textile, and I discover no St. Archelaus in Coptic hagiology. The names Achilles (Achillas) and Archelaus were confused in Christian Egypt, and the eighteenth Patriarch of Alexandria, Achillas, is sometimes called Archelaus (Arabic أرسل): but he was not a popular character, having ordained Arius deacon, and I cannot identify these scenes with anything in his life, or see why he should be called *παραστάτου*, a 'helper': I do not know such a Christian use of the word, which may be a mistake for *προστάτου*, a 'champion', and this is even less suitable for the Patriarch Achillas.

I shall pass much more rapidly over the remaining pieces at South Kensington. In those of later date than the specimens described above, the lettering seems to come to be used simply as an ornament; the letters, even where they are recognizable in form, are used as decorations, and do not make

words or names. An analogous development, as is well known, took place with the Arabic character, both on textiles and on other materials, such as Oriental rugs and carpets, and Toledo work (iron inlaid with gold), where what appears

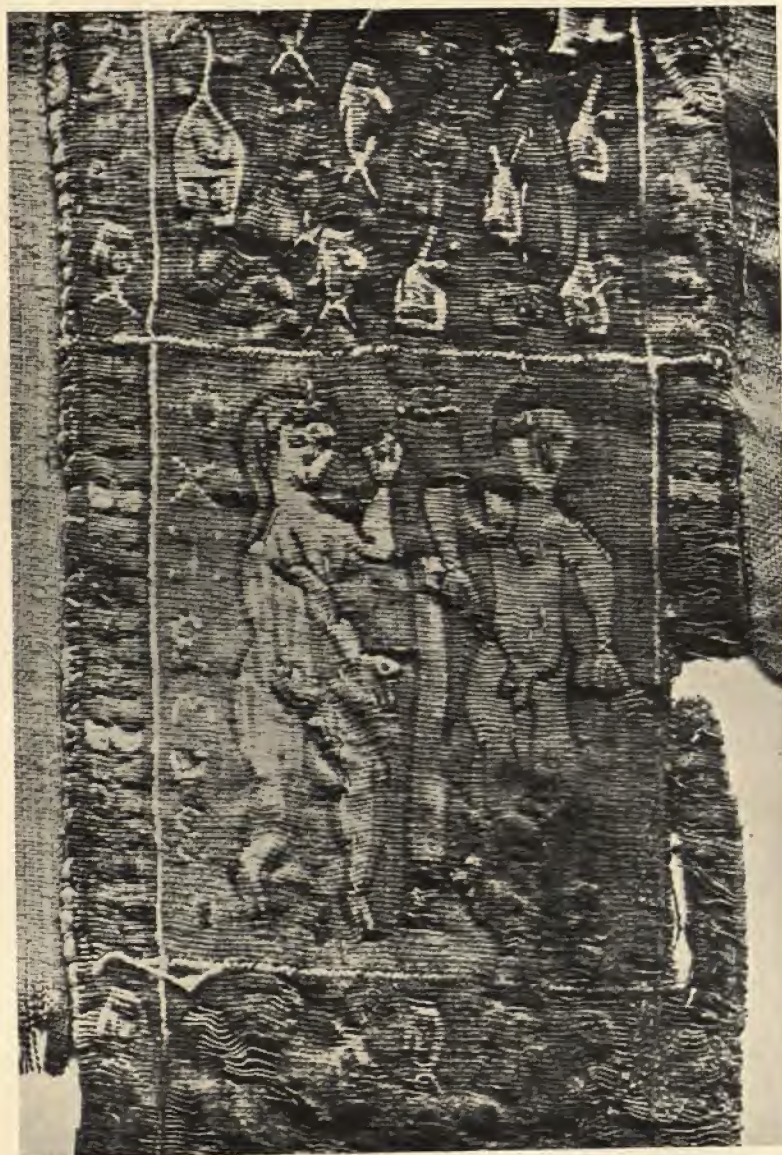


Fig. 4. Tapestry-woven panel, Adam and Eve, from Akhmim, sixth or seventh century.

at first sight to be an Arabic inscription is seen upon examination to be only a conventionalized form of ornament—resembling lettering, but actually without meaning. Reproductions are more valuable than descriptions of the textiles with such ornament, and I am enabled through the kindness of Mr. Kendrick and the authorities of the Victoria and Albert Museum to give photographs of nos. 14, 17, 18, 19.

(14) *Ibid.*, no. 747. From Akhmim, sixth or seventh century; Adam and Eve (fig. 4). Above Adam's head are two much broken letters which *might* be $\overline{\alpha\delta}$: in a column, by the side of Eve, the letters $\Theta\chi\iota\epsilon\alpha\epsilon$ (?) $\epsilon\Theta$. I am inclined to explain the first part of this by the suggestion of some form of $\epsilon\iota\alpha\epsilon$ or $\epsilon\gamma\iota\alpha\epsilon$ with the feminine definite article prefixed—'the holy woman'.

(15) *Ibid.*, no. 671. Sixth to eighth century. A hunting scene, and above it letters resembling $\eta\epsilon$ $\Theta\gamma\eta\chi$ $\chi\eta\epsilon\alpha\epsilon$ ϵ .

(16) *Ibid.*, no. 736. From Akhmim, sixth to eighth century. A roundel containing a figure; in columns, letters on one side resembling $\iota\epsilon\Theta\Theta\chi$ and on the other $\epsilon\iota\epsilon\chi\eta\epsilon$.

(17) *Ibid.*, no. 631. From Akhmim, sixth or seventh century. In a roundel



Fig. 5. Tapestry-woven band from Akhmim, sixth or seventh century.

which may possibly represent David before Saul (because the other roundel on the same piece shows a figure, which may be David, wrestling with a lion), there is a number of scattered letters—some hardly recognizable as such—which do not make sense (fig. 5).

(18) *Ibid.*, no. 626. In one of three roundels is a figure with halo and spear on horseback, and two standing figures, with meaningless conventionalized letters on either side.

(19) *Ibid.*, no. 627, is a fine piece, probably eighth century, on which the band has groups of sitting and standing figures (a saint addressing a congregation?) and horsemen (military saints?), and above it a row of letters, of which many appear to be Coptic, some upside down (figs. 6 and 7).

(20) *Ibid.*, no. 724, sixth to eighth century, from Akhmim. In this I am inclined to doubt whether there is even any attempt at lettering; the conventionalization has gone so far that the result is nearer to a geometrical ornament than to writing.



Fig. 6. Tapestry-woven hanging, probably eighth century.



Fig. 7. Tapestry-woven hanging, probably eighth century.

DISCUSSION.

MR. A. F. KENDRICK said it was generally agreed that the group of stuffs in question dated between the first and eighth centuries of the Christian era, but agreement ended there. Pagan subjects were found on some pieces, Christian symbols on others: sometimes a pagan subject was given a Christian meaning, and both occurred on the same piece. The evidence from excavations was useful only in two cases: Professor Flinders Petrie had found coins of the fourth century, new when buried, with pieces of textile, and Gayet had found a will and other documents in a grave of about A. D. 450 at Antinoë. There were Egyptian forms of the Christian cross and the earliest form of the Christian monogram occurred on such fabrics. Every piece that could be dated was of great assistance, and he was glad to acknowledge the value of Mr. Gaselee's researches and his constant services to the Victoria and Albert Museum.



A BRONZE HEAD OF ATHENA AT BURLEIGH COURT, GLOUCESTERSHIRE

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IV.—*A Bronze Head of Athena at Burleigh Court, Gloucestershire.* By
Professor EDWARD SEYMOUR FORSTER, M.A., M.B.E., F.S.A.

Read 8th February 1923.

By kind permission of the owner, my friend Mr. Edward F. Elton of Burleigh Court near Stroud, I am able to call attention to an unpublished antique bronze head in his collection (pl. ix).

Nothing is known of its history before it came into his hands, but it has obviously been at one time buried in the ground, and particles of earth are ingrained in the *patina* over a portion of the surface. It has evidently been roughly broken off from the body, the edge in front being jagged, while behind it is flush with the bottom of the helmet. The scale is two-thirds of life size. The head is hollow-cast and shows considerable variations of thickness, some parts being so thin that they have worn through; in particular about half the surface at the top of the crest has perished. The head should probably be pitched more forward than the position in which it is now mounted.

To deal with the face first—the cheeks and chin are full and rounded and do not show the bone structure. The nose, which practically continues the line of the forehead, is straight, and the nostrils and philtrum are delicately moulded. The mouth is short, with full lips and deeply depressed corners. The eyebrows are indicated by ridges, and the eyes, which are not set deeply in the head, are wide open, the lids consisting of somewhat hard ridges. The irises and eyeballs are indicated by a slight raising of the surface of the eye, but the details are obscured by corrosion. Waving locks of hair come down low over the forehead, escaping from under the helmet, which fits closely to the head, and continue over the ears, which they partly cover. On either side of the face in front of the ears are double locks of hair, which do not exactly correspond on the two sides. Behind the ears are other locks filling the interstices between the neck and the neck-pieces of the helmet.

The horsehair-plumed helmet is elaborate both in structure and ornamentation. Immediately above the forehead is a band decorated with a simple conjoint spiral pattern with an elongated rosette in the centre. Above this are five busts of horses with hogged manes and the thick necks and general structure of stallions; the two outer busts project slightly farther than those in the centre. There are traces of rosettes in each of the four spaces between the horses. At either end of the band over the forehead is a large plate or buckle decorated with what may be heraldically described as the 'caboched' head of a giant. Behind these buckles are two volutes, the lower of which forms the lower edge of the helmet proper, while the upper one appears to be merely ornamental. The neck-pieces, which project forward on either side, are decorated with

winged hippocamps in relief enclosed within narrow frames and admirably filling the available field.

The horsehair plume of the crest is effectively though somewhat conventionally rendered by incised lines. There is a note of realism in the way in which the tassel, with which it terminates below, is slightly bent to the left as though blown by the wind. The ridge of the crest is ornamented with eight rosettes on either side and one in the centre at the top. So much by way of description.

The general appearance and details of the head entitle us, I think, to assume without further discussion that it is a work of ancient art, and that it represents the goddess Athena. In the absence of external evidence, any theory as to the date and school must be based on an examination of the style of the head itself.

It has been frequently remarked both by ancient and by modern writers that the types of Zeus and Athena created by Phidias exercised an enormous influence on all later representation of these deities. Dio Chrysostom,¹ for example, says that no one who had once seen the Zeus at Olympia could conceive the god under any other form. He might have made the same remark about the statue of Athena Parthenos by Phidias which stood in the Parthenon at Athens. The type of this Athena is, as is well known, preserved to us in a number of more or less inadequate copies, including two statuettes, numerous coins, and several gems. If we examine the evidence for the details of the helmet of the Athena Parthenos, it seems clear that one element in the helmet of our Athena is derived from it. Our chief ancient literary authority Pausanias² merely tells us that the helmet of the Parthenos was decorated with a sphinx and gryphons. In the small copy at Athens, known as the Varvakeion statuette, the helmet has three crests, of which the central one is supported by a sphinx and those on either side by figures of Pegasus. From detailed copies of the head on gems and coins we learn that the gryphons were on the cheek-pieces, and further that there was a row of small horses on the front of the helmet. These horses are well represented on the famous gem signed by Aspasia,³ which was formerly in the Imperial collection at Vienna, but has now been returned to Italy under the terms of the Treaty of Versailles.⁴ The horses also appear on coins representing the head of the Parthenos. The late Dr. A. S. Murray,⁵ dealing with the evidence of gems and coins, writes: 'This and other cameos give a row of horses springing from the brow of the helmet. At present we have no confirmation of such a thing in sculpture, but the occurrence of it on later tetradrachms of Athens, as well as on a silver coin of Pella,⁶ suggests that

¹ xii, 14.

² i, 24, 5.

³ It is now on exhibit in the Palazzo Venezia in Rome.

⁴ *History of Greek Sculpture*, ii, p. 119.

⁵ *B. M. Cat. of Greek Coins, Macedonia*, p. 89, no. 2.

it was a feature of the original.' On the tetradrachm of Athens,¹ to which Dr. Murray refers, the horses are somewhat conventionally rendered; they are more clearly seen on a coin struck at Alexandria under Julia Mamaea.² The helmet of the Athena Parthenos was a stately ceremonial head-dress, whereas the helmet of our Athena might conceivably be worn in actual warfare; we may, however, I think, regard the row of horses' busts as an element the origin of which can be traced back to Phidias's famous masterpiece. Innumerable types of Athenian coins represent Athena as wearing a single crested helmet with a horsehair plume, and it is probable that another famous representation of the goddess by Phidias, of a more warlike character than the Parthenos, namely, the so-called 'Promachos' statue, which stood in the open on the Acropolis, wore a helmet of this kind.

Of the other elements in the helmet of an Athena the masks of giants' heads on the buckles are a very natural ornamentation, since one of Athena's most famous exploits was the prominent part she took in the victory of the gods over the giants so often portrayed in Greek art. It was represented, for example, as Pliny tells us,³ on one side of the shield of the Parthenos. The hippocamps on the neck-pieces do not appear to have any special connexion with Athena and were no doubt chosen because of their suitability to the available space. The neck-pieces themselves are unusually large; the closest parallel which I have observed is on the helmet of an Athena on a coin of the Athenian colony of Thurii:⁴ there the decoration takes the form of a gryphon and no doubt copies the Parthenos statue. The style of relief in the hippocamps recalls the figures on the cuirass of the well-known portrait-statue of Augustus known as the 'Augustus of Prima Porta', which have been usually regarded as Greek in origin.⁵ The volutes on the helmet find an exact parallel on the helmet of an Athena on a white Attic vase in the British Museum.⁶

The face, as we have already seen, shows little bone structure and is characterized by a general roundness of forms in the cheeks and chin, while the mouth is short with the corners deeply depressed and the lips full. These have generally been recognized as characteristics of the representation of the female head during the Hellenistic Age (c. 320-150 B.C.) and became more marked towards the end of that period. On the other hand, the somewhat conventional waves of hair over the forehead of our Athena and the locks falling over the ears are decidedly archaic in character. Thus while the forms of the face are in

¹ P. Gardner, *Numismatic Commentary on Pausanias*, J. H. S., viii (1887), pp. 22-3, pl. lxxiv, no. 23.

² *Ibid.*, no. 25.

³ *N. H.*, xxxvi, 18.

⁴ Furtwängler, *Masterpieces of Greek Sculpture* (Engl. Trans.), pl. vi, no. 5.

⁵ Cp. Wickhoff, *Roman Art* (Engl. Trans.), p. 28.

⁶ *B. M. Cat. of White Athenian Vases*, pl. xiv.

the late Hellenistic style, there is evidence of eclecticism in the combination of elements taken from earlier sources in the rendering of the helmet and the hair. Such eclecticism is very characteristic of the period which saw the close of the last phase of Greek art, the Hellenistic Age, and the beginnings of Roman art, and is generally known as the Graeco-Roman period. It was a period marked by an almost complete absence of originality, the two main activities of artists being the copying and the adapting of earlier types. Works of the latter class are commonly called archaistic, being attempts on the part of artists to work in a less advanced style than that of their own day. One of the most striking examples of this class of work is the well-known marble archaistic Athena discovered at Herculaneum and now in the Museum at Naples.¹ Here the face is distinctly Hellenistic, but the treatment of the hair is even more archaic than that of our Athena, while the rendering of the drapery recalls that of the early female statues dating from before the Persian wars found on the Acropolis at Athens. I would suggest quite tentatively that the head of Athena at Burleigh Court belonged to an archaistic figure of this kind, in which a sculptor, of perhaps the late second or early first century B.C., attempted to satisfy the demands of a patron who wished for an Athena in the style of the second half of the fifth century—just as the sculptor of the Naples figure tried to reproduce a still earlier type—with the result that he produced an eclectic work embodying certain earlier elements but obviously betraying its late origin.

The provenance of this head must almost certainly be Italy. All of us who are interested in the history of Art have been recently reading the Farington Diary, which illustrates more vividly than any previously published work the fashionable craze in the late eighteenth and early nineteenth century for works of ancient art imported from Italy, and, incidentally, the shameless manner in which they were patched up and restored. The Burleigh Court head may well have been imported from Italy by a dealer or brought back by some one who had made the Grand Tour. Being of bronze and in excellent preservation, it has fortunately escaped the hands of the restorer. It cannot be claimed as a masterpiece of the first order, but it has a certain charm of its own, and is a bronze original, of which none too many have survived from antiquity. If the view which has been expounded is accepted, it illustrates an interesting phase in the history of ancient art; and in the horses which adorn its helmet we have what appears to be the only known reproduction in sculpture of an element in the decoration of one of the world's greatest masterpieces.

¹ Catalogued under no. 6007: Reinach, *Répertoire*, i, 227, 1.

V.—*An Anglo-Saxon Cemetery at Bidford-on-Avon, Warwickshire.* By JOHN HUMPHREYS, *Esq., F.S.A.*, J. W. RYLAND, *Esq., F.S.A.*, E. A. B. BARNARD, *Esq., F.S.A.*, F. C. WELLSTOOD, *Esq., M.A., F.S.A.*, and THOMAS G. BARNETT, *Esq.*¹

Read 23rd February 1922 and 22nd February 1923.

IN June 1921, during the cutting of a new road in the village of Bidford-on-Avon, Warwickshire, various articles were brought to light indicating an Anglo-Saxon cemetery. The excavation took place on a site at the back of the High Street, on the north side, in a gravel plateau about 100 yds. from the present bank of the river Avon, 150 yds. from the Roman Rycknild Street, and 200 yds. from the old ford, which lies to the east of the church. The site is on the extreme western border of Warwickshire, within a mile of the Worcestershire boundary.

The site of the village must always have been an important position strategically, and especially so during the occupation of Britain by the Romans, as is indicated by the military road, the Rycknild Street, which, diverging from the Fosse Way a few miles out of Cirencester, ran almost due north over the Cotswolds into the Avon valley, crossing the river by the ford at Bidford, where the original pavement still exists under the turf in the meadow adjoining the river. In the fifteenth century a diversion was made from the Roman road when within half a mile of Bidford to cross the stone bridge then erected, a little to the west of the ford; the divergence is very clear. After crossing the Avon, the Rycknild Street pursued its course to Alcester, and by way of Beoley, King's Norton, Birmingham, and Sutton, to Wall (Letocetum) near Lichfield, an important military post on the Watling Street, traversing the heart of the Forest of Arden in its passage northwards.

¹ We desire to record our indebtedness to various experts and authorities on Anglo-Saxon antiquities, and especially to Professor Baldwin Brown in his *Arts in Early England*, Mr. Thurlow Leeds in his *Anglo-Saxon Settlements*, to Mr. Reginald Smith in the *Guide to Anglo-Saxon Antiquities*, recently published, from all of which we have derived great assistance, and to Professor James C. Brash of Birmingham University for his notes on the cranial and other skeletal characters.

AN ANGLO-SAXON CEMETERY AT

There is evidence of the continued use of the Rycknild Street in the great number of Roman coins which have been discovered from time to time at Alcester, three miles north of Bidford, a station probably of some size. In 1838 a great find of Roman coins was made there in digging a new cellar near the churchyard in the centre of the town, where an earthen pot, wedged full of coins set edgewise, contained 800 silver pieces and 16 of gold. The series



Fig. 1. Map of Bidford-on-Avon. The x x indicate the site of the burial ground.

Reproduced from the Ordnance Survey Map with the sanction of the Controller of H.M. Stationery Office.

illustrated the history of the Roman Empire from 48 B.C. to A.D. 337; every reign had its example.

A short road, said to be of Roman origin, diverged from the Rycknild Street just before it crossed the ford at Bidford, and ran along the edge of the cliff at Cleeve Prior overlooking the south bank of the Avon. In a field adjoining, about a mile and a half from Bidford, was discovered by a quarryman in 1811 what was reported to be the greatest hoard of Roman coins ever discovered in England—found buried in two large red earthenware urns a short distance below the surface of the ground, protected by large stones above and

beneath them. They numbered 100 gold pieces, and about three thousand silver coins. The gold coins were of the Emperors Valerian, Valentinian I and III, Gratian, Theodosius, and Arcadius, and were of very pure gold. It is recorded that they were in an excellent state of preservation, appearing as if they had just been issued from the mint, not the minutest mark being obliterated. 'The total weight was six pounds.'¹ As most of the Roman coins belonged to the end of the fourth century, it is probable that the treasure was hidden at the close of the Roman occupation, when the legions were being withdrawn from Britain, leaving the country and its inhabitants in a helpless condition open to the attacks of the fierce sea-raiders from across the North Sea.

In the year 410 the Roman legions were withdrawn from Britain, and shortly afterwards bodies of Saxons landed on the east coast and penetrated by means of the river valleys into the heart of the country, where settlements were effected in the vicinity of the rivers. This fact is strikingly evident in a map showing the distribution of their cemeteries published by Mr. Thurlow Leeds in his book *The Archaeology of the Anglo-Saxon Settlements*. These cemeteries are practically all confined to the river valleys in the east and south of England of a date A.D. 450-650. To the north of the Avon, in the Midlands, only half a dozen burial-places are recorded, while in the country farther to the north, occupied then by the Midland forests, there is no archaeological evidence.

According to the revelations by the spade, the pagan Saxons did not occupy the Severn Valley, nor Wales. Bidford was one of the farthest points west to which they penetrated. In Worcestershire and Warwickshire the dense forests which covered the land, Arden in Warwickshire, and the forests of Horwell, Ombersley, and Feckenham extending over the whole of Worcestershire east of the Severn, with Malvern Chase and Wyre Forest on the west side of the county, proved an impenetrable barrier to the first invaders, while offering a secure sanctuary to the Britons. Such was the condition of the Midlands until towards the end of the sixth century, when the Anglo-Saxon Chronicle records a great battle fought between the West Saxons under Ceawlin and Cutha the West Saxon princes and the British in 584 at a place called Fethanleag which is now generally considered to have been near Stratford-on-Avon.² The Britons suffered defeat and the remnant probably sought protection in the Midland forests to the north, and the victorious result was supposed to have opened up the whole of the Avon valley to the conquerors.

¹ *Evesham and Four Shires Notes and Queries*, vol. ii, p. 213.

² The Rev. C. S. Taylor in *Transactions of the Bristol and Gloucester Archaeological Society*, 1896-7, p. 271.

If the plain square-headed brooches (pl. XIII, fig. 1), of which pattern nine specimens were found at Bidford, are correctly assigned to about the year A.D. 500, it might appear to show that the penetration of the country so far westwards in the Midlands was at an earlier period than the date assigned by the Anglo-Saxon Chronicle to the battle of Fethanleag.

The possession of Bidford was of supreme importance strategically, for the river Avon running almost from east to west, with its morasses and bogs, blocked the passage of hostile forces advancing from the south; and the possession of the ford, the Roman road, and the north bank of the river, placed in the hands of the conquerors the control of the Midland forests and opened up the way northwards.

In A.D. 597 Augustine landed in England, and shortly afterwards Christianity was introduced, bringing Christian burial into use, and replacing the pagan interments with their grave furniture, weapons, and ornaments.

The value of the evidence produced by the spade from these pre-Christian burials is the light thrown upon the dark period in England after the departure of the Romans, there being no recorded history for two centuries. The archaeological evidence suggests an early settlement of this important strategic site and its occupation for a considerable time, judging by the numerous remains unearthed. In the neighbouring village of Cleeve Prior, which contains about 300 inhabitants, the burials at present occasionally number only one in a year.

The new road cut at Bidford in 1921 was undertaken to provide work for the numerous unemployed labourers, on land belonging to the Bidford Co-operative Society, and all the articles which it was possible to rescue were secured by Dr. Crawford and Mr. Boshier, to whom we are much indebted for their constant care and watchfulness.

These discoveries were reported to a meeting of the Society of Antiquaries on 23rd February 1922, when the President, Sir Hercules Read, suggested that the site should be properly explored, offering a grant from the Society towards the expenses of the excavation. The Bidford Co-operative Society readily gave permission for the undertaking, and on Monday, 29th May, the digging was begun, and continued without a break until 31st August. Two intelligent men were engaged, who soon developed considerable skill and aptitude for the work.

The method of excavation adopted was to cut a trench 7 ft. wide, to a depth of about 2 ft. 6 in., where the bodies were usually found. The ground was first surveyed, and a plan made by Mr. Wellstood, who carefully measured the position of each body indicated, with the grave furniture. Exact notes were taken of every article discovered, and it is safe to say that hardly a bead was

lost, as two or more members were always present to watch every spadeful of earth removed, the workmen never being left alone.

When digging below 18 in., great care was exercised, and when a portion of a bone was uncovered the subsequent exposure of the body was effected with an old carving-fork, brushes with long fibres, and fingers, without disturbing the skeleton, or displacing the weapons or ornaments, the soil being afterwards passed through sieves of different degrees of fineness, ensuring the discovery of the smallest article.

What is the reason then for the extraordinary preservation of the skeletons at Bidford? The gravel deposit on which they lie is 20 ft. in thickness, composed of yellow and black flints, Oolitic limestone, ironstone materials from Northamptonshire, Gryphaea shells from the Lias of the immediate neighbourhood, all washed down into the Avon valley and distributed over the Bidford district at the final melting of the Scandinavian glacier, which after crossing the plain where now is the North Sea, invaded our eastern coasts, depositing vast masses of material on our shores and penetrating into the heart of England.

The eastern derivation of the gravels is confirmed by the presence in them of perfectly rounded balls of flint, from the cannon-shot gravels of eastern Norfolk, which were probably formed in subglacial kettle-holes, similar to those in the glacier garden at Lucerne. The answer is supplied by the glacial drift gravels at Bidford, which, by their calcareous nature and excellent drainage characteristics, neutralized acidity from the atmosphere and prevented the accumulation of stagnant water. This was further noticed when the bodies were buried on a pocket of boulder clay; most of the bones except the skull were missing, and even the crania and teeth were soft and decalcified by the action of sour stagnant water, unable to drain away from the surface of the boulder clay, and dissolving the calcareous materials in bones and teeth. The gravel further yielded a good example of a Mousterian flint implement carefully worked round the edges.

The area excavated during the summer of the previous year is divided by a post-and-rail fence into two portions, that to the south being roughly 60 ft. by 50 ft., and the larger area to the north being approximately 91 ft. by 84 ft. In the majority of cases the grave seemed to have been dug sufficiently long to enable the body to be placed in it at full length, but there were many instances in which the bodies were buried with the limbs drawn up into various positions. No scheme or plan seemed to have been followed in the arrangement of the graves, which were scattered unequally over the area excavated. Of the eighty bodies of which it was possible to take accurate measurement thirty-one were placed with their feet to the north, eleven to NNW. or NW., and thirteen to

NNE. or NE.; thirteen were pointing due east, ten to ESE. or SE., and only two to the south. Thus some seventy per cent. of the bodies were buried with their feet pointing between NW. and NE., and it was remarkable that the direction between south and north-west seemed to have been most carefully avoided, there being not a single occurrence of burial with feet towards that part of the compass. No sign of a coffin of wood or of protecting stones was found, nor was any trace of a cerecloth or outer wrapping noticed. It is, perhaps, worthy of mention that of the thirteen burials to the east, eight were entirely destitute of grave furniture.

Considering the shallow burial, and the time which has elapsed since the bodies were interred, many are in a remarkable state of preservation, the skulls, jaws, and teeth suggesting a fine vigorous race of men. The skulls indicate a long-headed (dolichocephalic), intelligent people, with stout jaws, pronounced chins, and splendid teeth with but little evidence of dental caries. The surfaces of the crowns of many of the molars are worn considerably, the closure of the teeth in front being generally edge to edge, and not, as in modern European races, with the upper front teeth closing over the lower. In some instances the surfaces of the teeth were greatly eroded, occasionally exposing the pulp or nerve chambers, and now and then causing an abscess from infection by bacteria. But usually, side by side with rapid wear of the enamel and dentine, the pulp became protected by a formation of secondary dentine or ivory over the nerve cavity, keeping pace with the excessive erosion and protecting the nutrient organ of the tooth from injury; of this process there are some remarkable examples.

The abnormal wear of the surfaces of the crowns indicates a diet of coarse food mixed with grit, caused by the primitive fashion of grinding corn, or rather crushing it in a rough stone quern.

The arrangement of the teeth was also strikingly symmetrical, set in a sweeping curve with an absence of crowding. The skeletal remains were those of men, women, and children, the majority of the adults being in the prime of life—few over forty years of age, and very few really old people. The children represented all ages from 4 years up to 21, and it is amazing to find the jaws and the developing permanent and milk teeth practically perfect, notwithstanding their burial for fourteen centuries. Most of the adults were either quite young, many with unerupted wisdom teeth, or well under middle age. The men were buried generally lying on their backs, with shield on the left breast, the iron umbo of which remained. By the side of each warrior were an iron spear-head and a knife. The women were interred occasionally with a pot close to the head on the right-hand side, probably with food or drink, and a small knife was found lying on the breast or at the side. The cemetery was of an early date, undoubtedly pre-Christian, as the bodies

were interred, the men with their arms, spears, lances, knives and shields, and the women with their necklaces of amber and glass beads, and often a pair of brooches with jewelled adornments of garnet on the breast, for fixing a mantle. The ornaments and weapons bespeak an Anglo-Saxon origin, and that is well seen in the sockets of the weapons, which were invariably open. The iron



Fig. 2. Skeleton with legs crossed at ankles.



Fig. 3. Warrior with iron umbo of shield on left breast.

weapons were numerous, and of various forms, being principally spears, lances, and knives of different shapes and sizes.

SKELETONS.

The following notes will indicate the character of some of the most perfect skeletons:

1. Lying on its back, the legs crossed at the ankles, right over left, the head reclining to the left, the right arm bent at the elbow and raised, the left arm extended, the hand lying on the left thigh; the skeleton was practically perfect (fig. 2).
2. Body lying on its back, knees apart, arms across the chest, head bent forward. Cranium, lower jaw, and teeth perfect.
3. Body extended on its back, right arm stretched, the hand resting on the right thigh, the left arm by the side.

4. Body lying on its back, arms lying by the side, umbo of shield on left breast. Cranium fractured—both patellae present.

5. Similar body and position. Warrior, right arm bent over body, left extended, and lying by the side, with spear-head against shoulder, and iron umbo of shield on left breast, and iron rivets with round heads for attachment to shield, with small knife below, and iron buckle for belt (fig. 3).

6. Body extended of man, with spear-head by right shoulder, and pointed iron ferrule by ankle for fitting on the butt. The space between measured 4 ft. 6 in., the same length as the Roman spear. A knife lay on his left side. A similar ferrule was found at Fairford, figured in *Fairford Graves*,¹ pl. xi, fig. 8.



Fig. 4. Woman with ornaments and wooden situla.

7. A woman lying on her back, with head inclining to the right. A small wooden situla on her right, a pair of saucer-shaped brooches on her chest, a necklace of numerous amber and glass beads hanging from her neck, a large bronze pin, and a small knife below. Most of the small bones have disappeared (fig. 4).

All the spears and lances were attached to the wooden handles with the characteristic open socket, in which a portion of the wooden shaft was still present (pl. x, fig. 1). Twenty-six spears and thirty-one knives were unearthed, and fragments of many others. In many instances, parts of the wooden sheaths and handles were preserved, and in one case an ornamented bronze ferrule around the handle of a knife. Several arrow-heads of different patterns with closed sockets (pl. x, fig. 2) were unearthed. Iron arrow-heads have been found at Chesterton Camp, Warwickshire, and in the churchyard at Radford Semele, Warwickshire, which were thought to be medieval, and are now in the British Museum.² An object of interest was the small barbed javelin, the only specimen

¹ *Fairford Graves*, by William Michael Wylie.

² *The Arts in Early England*, iii, 242.

discovered; they are but rarely found (pl. x, fig. 2, *b*). Not a single example of a sword or battle-axe turned up, all the weapons being for attack by thrusting. Eight shield bosses or umbos were found with various other iron articles, and also two iron styli for writing on wax (pl. x, fig. 2, *e*) as well as several iron girdle-buckles, long hooks (pl. x, fig. 2, *d*), and nails.

As in most cemeteries of this date both customs of burial, by cremation and inhumation, are found. No less than seventeen more or less perfect cremation urns were discovered scattered about irregularly between the bodies, but in addition to these fragments of more than one hundred and twenty others were found. There is every indication that the urn burials date from an earlier period than the inhumations. In one case particularly, a fragment of a broken urn was found under the body in such a position that it could only have got there at the time the body was buried. Other fragments of the same urn were found lying above and around the body. The urns were buried at only an average depth of 24 in., while the bodies were placed at a greater depth (some 3 to 4 ft.), which involved the disturbance and consequent breakage of any urn which might have been accidentally met with in digging the graves. It is thus that so many other urns have been discovered in fragments only. There were cases in which urns were discovered *in situ*, but with the neck and shoulder broken away. This was probably caused, not by disturbance for inhumation, but by the plough.

The smashing of so many urns by subsequent inhumations seems to show that no mark or monument was placed above the surface of the ground to indicate the place of interment, but on the other hand one is led to infer that some such mark was originally placed over the bodies, as in no single instance did a case of superinhumation occur, and in only three cases were the bodies found placed close enough together to be touching. At the present time there is nothing whatever above ground to show that a cemetery exists on the site.

Fragments of charcoal were frequently found in close proximity to the bodies. In the case of thirteen burials a considerable amount was noted, especially in the vicinity of the pelvis and between the legs. A large hearth consisting of about a wheelbarrow-full of large pebbles, charred and split by the action of fire, was uncovered, but there is nothing to indicate that it bore any relation to the nearest body buried some 3 ft. to the east of it.

CINERARY URNS.

Of the cinerary urns found in the cemetery all are hand-made, that is, fashioned without the aid of the potter's wheel. They vary considerably in size; the largest, of which unfortunately only the lower half remains, being some

43 in. in circumference at the widest part, and originally about 13 or 14 in. in height, and the smallest 20 in. in circumference and $6\frac{1}{4}$ in. in height. In colour they are mostly black or very dark brown, only one being of a pale reddish-brown. In one case the mouth of the urn appears to have been covered by a potsherd of buff-coloured earthenware, which was found in fragments inside the urn with the cremated remains. Much of the pottery is very imperfectly baked and easily soluble in water. Some of the urns are quite devoid of ornament, but from the similarity of conditions under which they were found, it is certain that they were used at the same time and by the same people as the ornamented ones (pl. xi, fig. 1).

As is usual, the ornamented urns may be divided into three classes, the first and most distinctive of which has projecting bosses or knobs made by forcing the soft clay of the wall of the vessel out from the interior. On one urn the number of projecting bosses is twelve, on another only seven.

A second method of ornamentation consists of impressed lines or markings arranged in simple linear patterns, and formed either by incisions or shallow grooves made with the shaped end of a piece of wood.

The third kind of ornamentation which is used in conjunction with either or both of the above methods is obtained by impressions made in the wet clay by means of wooden stamps. These impressed stamps show a fair amount of variety and consist of sloping strokes, chevrons, single or double circles, stars or rosettes, with four, five, seven or eight points all arranged in circular shape, and a kind of lattice-work pattern, not radiating like the stars, but based on the right angle and arranged with a circular bounding line. On one large urn (no. 55) is a continuous line of ornament consisting of squares adjoining each other point to point, with a dot in the centre of each, which can only have been applied by a roulette (pl. xi, fig. 2). On another (no. 68) the ornamentation on the shoulder of the urn is completed by a series of inverted triangles pendent from the lower of two horizontal lines, which are strongly reminiscent of the triangular ornaments of bronze frequently attached to the upper hoop of the wooden buckets of the period. All the cinerary urns are rounded underneath or just flattened sufficiently to make them stand steadily. As may be expected, none of them has handles, or even a moulded foot.

All these earthenware vessels above described are cinerary urns and contain cremated human remains. There are, however, certain other earthenware vessels which do not fall in the same category. The first is of blackish earthenware, $6\frac{1}{4}$ in. high, with a globular body narrowing at the neck and turning slightly outwards at the rim. It was found by workmen in 1921, and no record of its position or contents is available. It is almost certainly not a cremation urn.

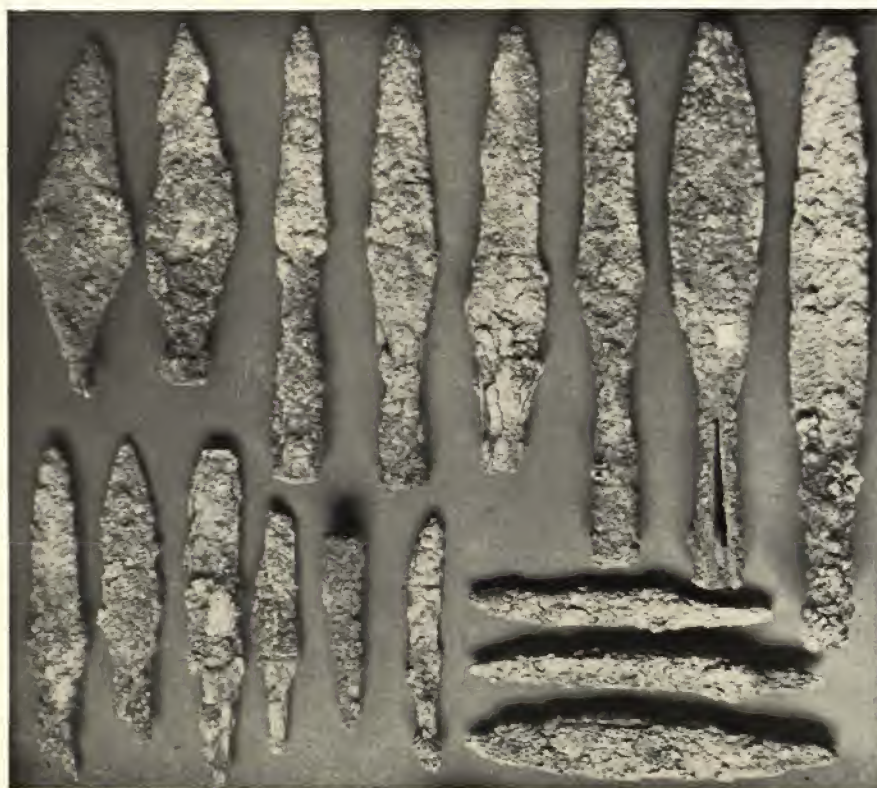


Fig. 1. Iron Weapons: Spears and Knives



Fig. 2. *a.* Iron Arrow-heads: *b.* Javelin: *c.* Buckles: *d.* Hooks: *e.* Styli: *f.* Shield Rivets: *g.* Tinned Plate from apex of Shield-boss



Fig. 1. Unornamented Cinerary Urn



Fig. 2. Ornamented Cinerary Urn

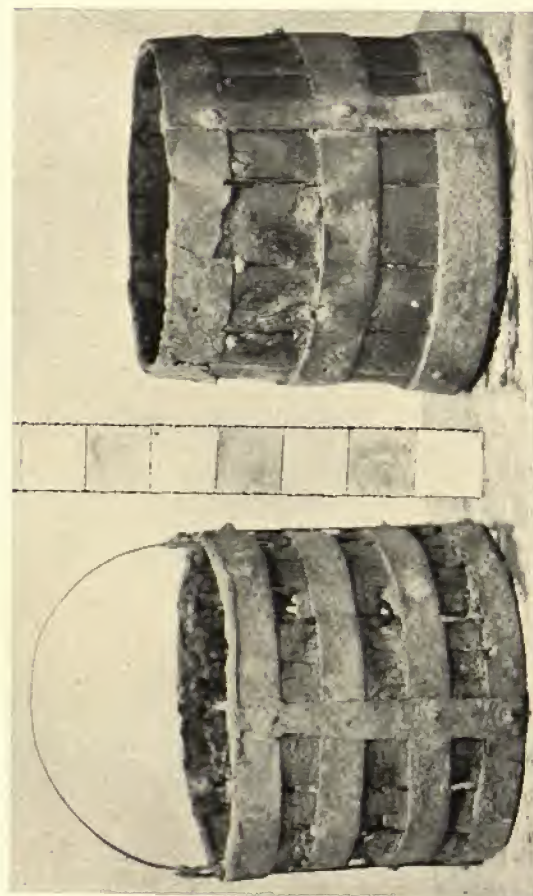


Fig. 3.
Wooden Buckets with bronze hoops and upright bands



Fig. 5. Bronze Bowl

The second is a small vessel (no. 87) only $3\frac{1}{4}$ in. in height and $3\frac{1}{2}$ in. in diameter at the mouth, ornamented with eight projecting bosses between which are two groups of three vertical lines. Above them on the shoulder are three horizontal lines, and then a series of impressions of a four-pointed star or equal-armed cross, surmounted by two more horizontal lines round the neck. It was found at a depth of only 2 ft. to the right of a skull which, like the rest of the skeleton, was very incomplete. It probably belongs to the same class of vessels as the wooden bronze-mounted buckets, and may have served the purpose of furnishing a supply of food or drink to the deceased, or may, as Professor Baldwin Brown suggests, have been placed by the head of the skeleton merely as a survival from the traditional use of the urn in cremation burials.

The third earthenware vessel which calls for special mention exhibits the peculiarity of rudimentary handles, or lugs, in the form of pinched-out projections of the clay, pierced with a small hole through which could be passed a small thong for the purpose of carriage. It further differs from the other urns in having a flat base with a roughly moulded foot, and is also of coarser and better-baked clay. Unfortunately, only fragments of the urn were found, and there was nothing to indicate whether it ever contained cremated remains, or what its original use may have been.

BUCKETS.

Of the wooden metal-mounted pails or buckets which frequently betray their presence in the cemeteries of most of the Saxon and Anglian districts, two more or less perfect specimens (nos. 7 and 79) were found, both conforming to the usual cylindrical shape with upright sides of wood bound together by hoops of bronze, with upright bands of the same metal, to which the successive hoops are riveted, keeping the whole together (pl. XI, figs. 3 and 4).

The first (no. 7, pl. XI, fig. 3) was found standing in an upright position against the top of a child's, most probably a female's, skull, the rest of the skeleton except for the leg-bones being missing. No other grave furniture except two small eyed pins of bronze was found with the body. It measures $4\frac{1}{4}$ in. high and nearly 5 in. in diameter. The base had completely perished; the wooden staves, however, were perfect when first discovered, but shrivelled and fell to pieces before they could be treated with preservative. It still remains, however, a fairly perfect specimen. The handle, which is complete, is ornamented with a line of small circles punched into its upper surface. Of the four upright strips of bronze to which the four hoops are riveted, the two upon which the ends of the handle swing are also ornamented by a line of small indented marks down each side.

The other two upright strips terminate on the upper rim with circular ends. The rim is covered with a band of bronze held in place by a number of small riveted clips.

The second wooden bucket was found at a depth of 3 ft. 3 in., also in an upright position, at the right shoulder of the skeleton of a female (no. 79, pl. XI, fig. 4). It measures 5 in. in height and $5\frac{1}{4}$ in. in diameter at the top. In circumference it measures 17 in. at the top and 18 in. at the base. Like the first the bottom has disappeared except for a small portion of wood still fixed into the groove which held the whole base in its place. This bucket has only three hoops; the handle, two of the upright bands, and other parts of the bronze work are missing. The woodwork of this bucket is in a remarkably perfect state of preservation, owing to its having been treated with a preservative within a short time of its discovery.

The space between the middle and upper hoops had been ornamented with a series of twelve inverted triangles of bronze fastened at the points by rivets of the same metal to the woodwork, just beneath the lower edge of the uppermost hoop, as in the Taplow horn. Only some small portions of these triangular ornaments now remain, but there is just sufficient to show that they were embellished with a design in repoussé.

It is interesting to note that one of these triangular enrichments and also a mounting in the form of a quadruped cut out in thin sheet bronze were found at Bidford about the year 1860 and are now preserved in the Worcester Museum. They are given as illustrations in Professor Baldwin Brown's book on *The Arts in Early England*,¹ in which he suggests that they are of early date, probably sixth century.

In the third case only parts of two of the plain bronze hoops and two riveted rim-clips of a situla were found at a depth of 3 ft., some 5 or 6 in. to the right of and slightly above the skull of a female (no. 88) who was richly decked with grave furniture.

BRONZE BOWLS.

The bronze bowl (no. 21) was found at a depth of 3 ft. 6 in. with a saucer-shaped brooch at the side of it, the nearest skeleton, that of a child of about 11 years of age, being some 3 ft. away. It measures $8\frac{1}{4}$ in. in diameter at the rim, $25\frac{1}{4}$ in. in circumference under the rim, and about $4\frac{1}{2}$ in. in depth. It is beaten out of a single sheet of bronze and exhibits the process of fabrication in the varying thicknesses of the metal, which is one millimetre at the rim, but only half that thickness at the shoulder and base of the bowl where the super-

¹ Vol. iv, pl. cxiii, nos. 5 and 6.



Fig. 1. Bronze Disc Brooches with Circle and Dot Ornament



Fig. 2. *a.* Penannular Brooches: *b.* Flat Ring Brooches: *c.* Roman Bronze Fibula:
d. Belt Buckle with Silver Knobs

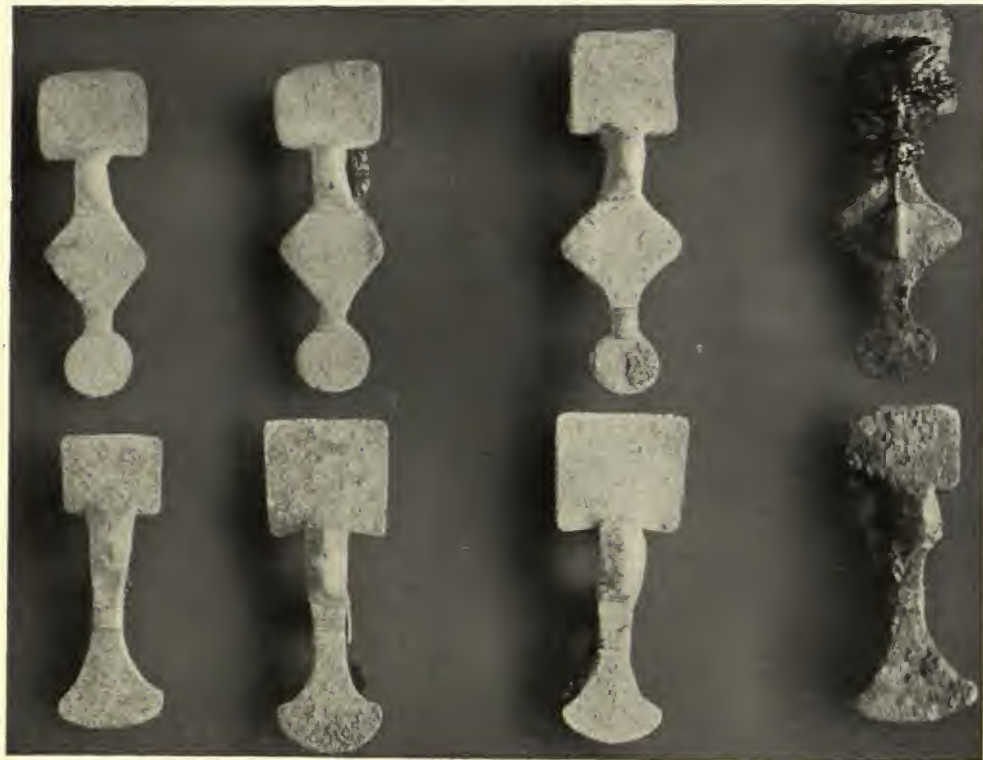


Fig. 1. Square-headed Bronze Brooches



Fig. 2. Gilded Bronze Saucer-shaped Brooches

ficial extension was greatest. The sides are turned over and outwards at the top to form a rim $\frac{3}{8}$ in. broad. On opposite sides the rim is widened into two triangular extensions which are turned upwards and pierced through the centre with a circular hole to receive the ends of the handle. The handle is of iron, but only small portions, one end still in place and a small length of $1\frac{1}{2}$ in., are preserved, the latter lying flat round the top of the rim (pl. xi, fig. 5).

The second bronze bowl is a fragment only, consisting of about one-third of the rim with portions of the sides and base. It is beaten from a thicker sheet of metal than the first specimen. One of the triangular ear-pieces is preserved, in the centre of which the end of the iron handle remains, and the bowls are very similar in shape and form.

The under sides of both bowls show clear traces of having been buried in close contact with some woven material—the marks of the threads being clearly discernible. There was also adhering to the base of each a substance about $\frac{1}{4}$ in. in thickness resembling decayed leather, some of which has been preserved.

Other examples of this kind of bowl have been found in various parts of the country, but the Bidford specimens conform most nearly to the one found at Croydon, now in the Grange Wood Museum, which is also illustrated by Professor Baldwin Brown, who dates it sixth century.

Only one other bronze vessel was found. It is a small cylindrical box $2\frac{1}{4}$ in. in height and about 2 in. in diameter which was found at a depth of 2 ft. 10 in. near the left knee of a child (no. 100) of about 8 years of age. It is a work-box or needle-case which might have been hung from a belt or fastened to a chatelaine, and the two ends of a small chain remain suspended from eyelets on opposite sides near the rim. Part of the lid is missing and no traces of a hinge are visible. It is ornamented by horizontal and sloping rows of tiny bosses beaten out from the inside (fig. 5). Adhering to the box was a small quantity of what appears to be decayed leather, and near by were several pieces of iron much corroded, on parts of which fragments of a fine woven fabric are clearly discernible.



Fig. 5. Cylindrical bronze box.

THE JEWELLERY.

The jewellery constituted quite a hoard, and showed a great variety of objects, most of them excellently preserved.

1. Two large bronze saucer-shaped brooches were ornamented with a crude cruciform design, and in the centre of each was another simple cross, poorly

and unsymmetrically executed. Discovered in 1921, these two brooches somewhat resemble a large saucer-shaped brooch with cruciform pattern, found at Bidford some years ago, now in the museum at Worcester.

2. Two bronze saucer-shaped brooches, each with zoomorphic designs and boss in centre, surrounded by four concentric circles; discovered in 1921.

3. Six bronze circular disc brooches ornamented with ring-and-dot ornament, differing in number of circles on each brooch, a favourite form of ornament, similar to those found at Wheatley and Fairford (pl. XII, fig. 1).

4. Pair of penannular brooches with movable pins, as at Duston, Northants (pl. XII, fig. 2, *a, a*).

5. Pair of flattened ring brooches, ornamented with dotted circles (pl. XII, fig. 2, *b, b*).

6. Roman bronze brooch, second-century date, with spring at base (pl. XII, fig. 2, *c*).

7. Eight square-ended primitive brooches, dating probably A.D. 500. Four with rounded ends and four others with crescentic terminations and ring-and-dot



Fig. 6. Square-headed bronze brooches with zoomorphic design.

ornament, but somewhat corroded (pl. XIII, fig. 1). Similar brooches were found at Long Wittenham and Kempston, and two others of the same type discovered a mile from Cestersover near Rugby in Warwickshire.

8. Two square-headed bronze brooches, with zoomorphic ornament on head of brooch, and lozenge with boss at the base, terminating in a grotesque human face showing eyes, nose, mouth, and beard, an unusual design; dug up in 1921 (fig. 6).

9. Six circular bronze saucer-shaped brooches, richly gilt (pl. XIII, fig. 2).

(*a*) Brooch with design of sun with rays surrounded by concentric circles and central boss; two were found. The pattern is unusual.

(*b*) Brooch with star pattern and central boss similar to one from Brightampton, Oxford, but better executed—the star design is also seen on one of the Fairford brooches.

(*c* and *f*) Bronze saucer-shaped brooches, with garnet boss in centre, surrounded by zoomorphic ornament.

(*d*) Bronze saucer brooch, with deeply engraved zoomorphic design, garnet boss in centre, very richly gilt.



Fig. 1. Bronze gilded Saucer-shaped Brooches



Fig. 2. Applied gilded Bronze Brooches

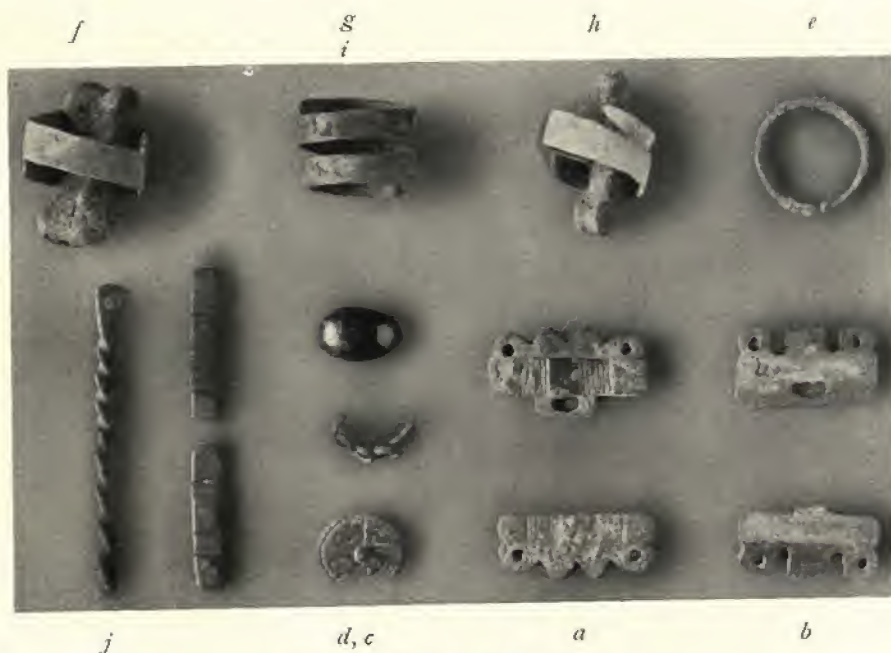


Fig. 3. Various Ornaments

a, b. Bronze Wrist Clasps: *c.* Bronze Button Brooch: *d.* Spiral Bronze Finger Ring: *e.* Bronze Ring:
f, g, h. Spiral Silver Rings: *i.* Polished Stone from Brooch: *j.* Portion of Bronze Twisted Toilet Implement



Fig. 1

Square-headed Bronze Brooch with
zoomorphic ornamentation gilded
5½ in. by 2½ in.



Fig. 2

Bronze Pendant of two intertwined Snakes



Fig. 3

Bronze Circular Pendant of twisted Serpents

(e) Bronze saucer brooch, with spiral ornamentation surrounded by three circles as at Frilford, Berks.

10. Pair of fine large saucer-shaped brooches, with zoomorphic leg ornament surrounding six-rayed star in centre, richly gilt (pl. xiv, fig. 1).

11. Pair of applied brooches 6.5 cm. in diameter, with maze of zoomorphic forms, garnet (missing) in centre of each, surrounded by rays—beautiful objects and highly gilded (pl. xiv, fig. 2).

12. A very beautiful square-headed brooch, highly gilded, perfect in every detail, as if it had come from the craftsman's hands but yesterday (pl. xv, fig. 1). It measures $5\frac{1}{2}$ by $2\frac{1}{2}$ in. The square head is attached to the foot of the brooch by a three-ribbed bow. The rounded termination of the base has the forehead and the eyes of a human face, from which a triple-lined column traverses the centre of the design ending in a grotesque face with eyes. The arms and body are ornamented with a wealth of zoomorphic figures and intertwined serpentine forms; the canopy over the head is formed of delicate spirals or tendrils; this motive is seen also in the centre and in the upper angles of the head of the brooch. Intertwining bodies and eyes make up a bewildering but most attractive pattern surrounded by the crenelated outer margin. It forms a remarkable illustration of the Saxon craftsman's artistic powers, and somewhat resembles a brooch from Duston, Northants, measuring $5\frac{3}{4}$ in. long, figured in Professor Baldwin Brown's *Arts in Early England*, iii, p. 339.

13. Part of a bronze pendant, with four hanging discs, one at each corner.

14. A small pendant, being a portion of the lower incisor of a beaver set in bronze, which may have been used as a charm.

There is a similar example in the British Museum from a barrow at Wigberlow, Derbyshire, but set in gold, and another from a grave at Castle Bytham, near Stamford, Lincs. The beaver was then probably in existence in the Avon valley.

15. Pair of bronze wrist clasps, one ornamented with lines (pl. xiv, fig. 3, a, b).

16. A small button brooch, ornamented with central boss, the only one discovered at Bidford (pl. xiv, fig. 3, c).

17. Portion of twisted bronze finger-ring (pl. xiv, fig. 3, d).

18. Bronze finger-ring (pl. xiv, fig. 3, e).

19. Three spiral silver rings, two of them enclosing the bones of the fingers they encircled (pl. xiv, fig. 3, f, g, h). All three were found on one hand. A similar ring is shown from Faversham in the British Museum *Guide to Anglo-Saxon Antiquities*, p. 45.

20. Twisted spiral piece of bronze, part of toilet implement (pl. xiv, fig. 3, j).

21. Garnet cut *en cabochon*, the silver setting of which crumbled to powder when exposed to the air (pl. xiv, fig. 3, i).

22. Three tweezers, bronze, of small size.
23. Bronze buckle.
24. Square tinned bronze buckle, with ring-and-dot ornament.
25. Bronze girdle rings.
26. Three others, one suggesting the origin of the split ring.
27. Bronze breast-pin with faceted head, toilet implements, and rings (pl. xvi, fig. 1).
28. Large bronze tweezers, with division in centre (pl. xvi, fig. 2, *e*).
29. Bone comb strengtheners with circles and dots (pl. xii, fig. 2, *d*).

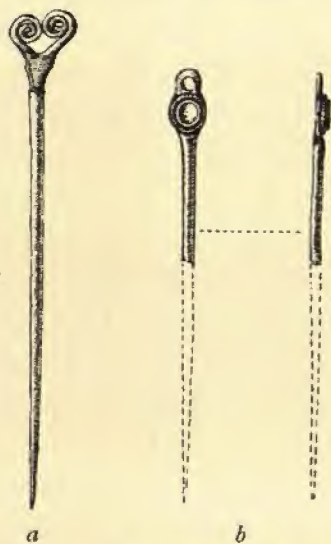


Fig. 7. *a*. Silver pin with double spiral head; *b*. silver pin with garnet cell-work.

30. An ivory armlet, which was in flakes when found, and showed signs of repair by riveting in Anglo-Saxon times.

31. Ball of meerschaum, perforated through the centre, probably worn as a pendant.

32. A large crystal spindle-whorl, similar to two found at Upton Snodsbury in Worcestershire, some eight miles distant—now in the museum of the Victoria Institute, Worcester, described by Mr. Ponting in 1867, in *Arch. Journ.*, xxiv, 351; there is another example from Fairford (*Fairford Graves*, pl. iv, fig. 1).

33. A bronze gilt ornament of quite unusual design representing two intertwined snakes with open mouths (pl. xv, fig. 2).

34. A circular bronze gilt ornament showing twenty serpents with bodies intertwined with open mouths directed to the periphery of the circle, and the tails to the centre (pl. xv, fig. 3). Both these ornaments are natural rather than zoomorphic in design, suggesting Scandinavian rather than Saxon origin: probably introduced into the Midlands by Norse elements, penetrating from the east coast.

35. A silver pin with double spiral head ornament, similar to the Irish pin shown in the British Museum *Guide to Anglo-Saxon Antiquities*, fig. 183, *d*, an unusual form in England (fig. 7, *a*).

36. Silver pin with a garnet cell-work ornament (fig. 7, *b*). A perfect comb was found in one of the urns with a hole drilled through the upper part, probably for attachment to a handle; there was also found a bone netting needle with eye at base, and notch above for fixing the twine; other fragments of bone bore the ring-and-dot ornament (pl. xvi, fig. 2, *a*, *b*, *c*).

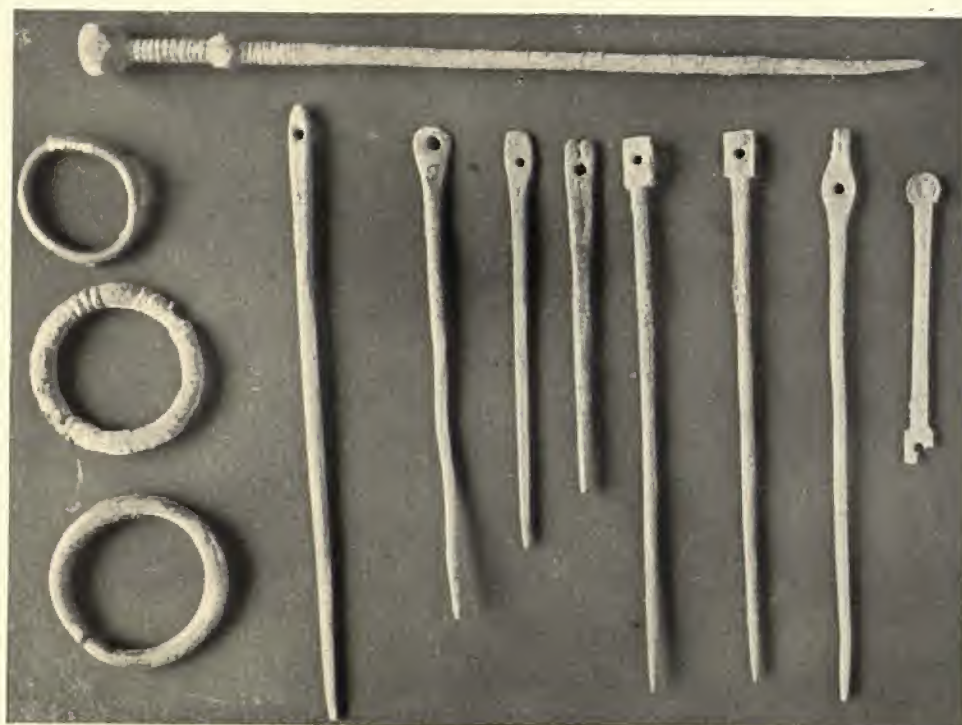


Fig. 1. Bronze Breast-pin (fig. 4), Toilet Implements, and Rings

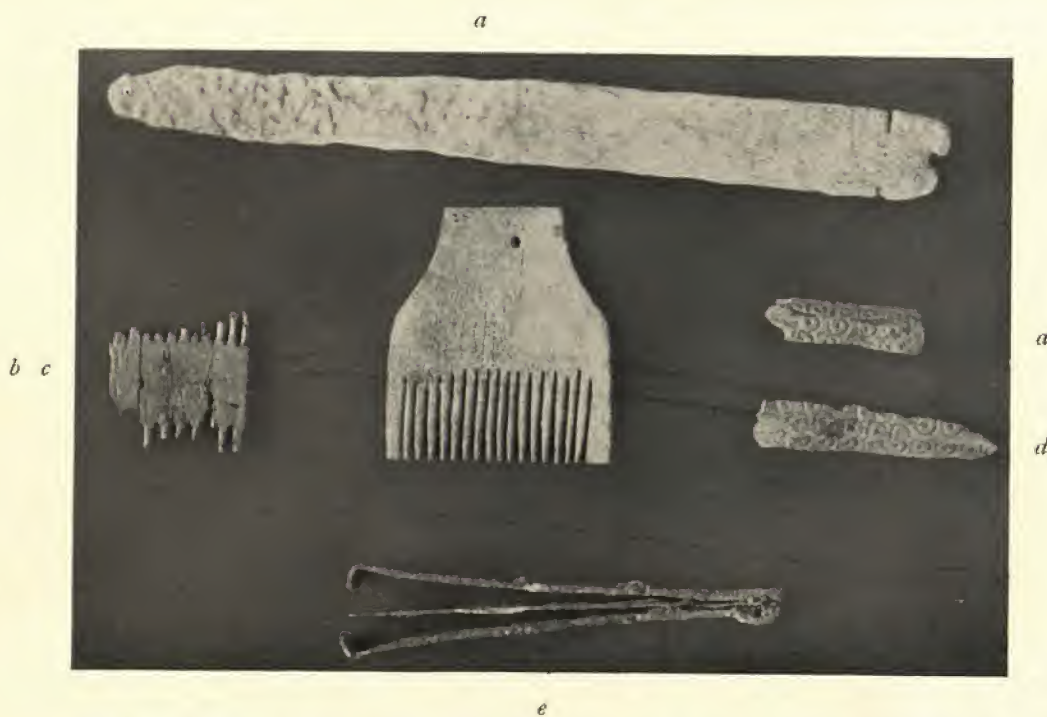


Fig. 2. *a.* Bone Netting Needle: *b, c.* Bone Combs: *d.* Bone Comb Strengtheners with circles and dots: *e.* Bronze Tweezers with central plate

a



b

Fig. 1. Necklaces of Glass, Amber, and Paste Beads



a (inner) *b* (outer)

Fig. 2. Necklaces of Glass and Amber Beads

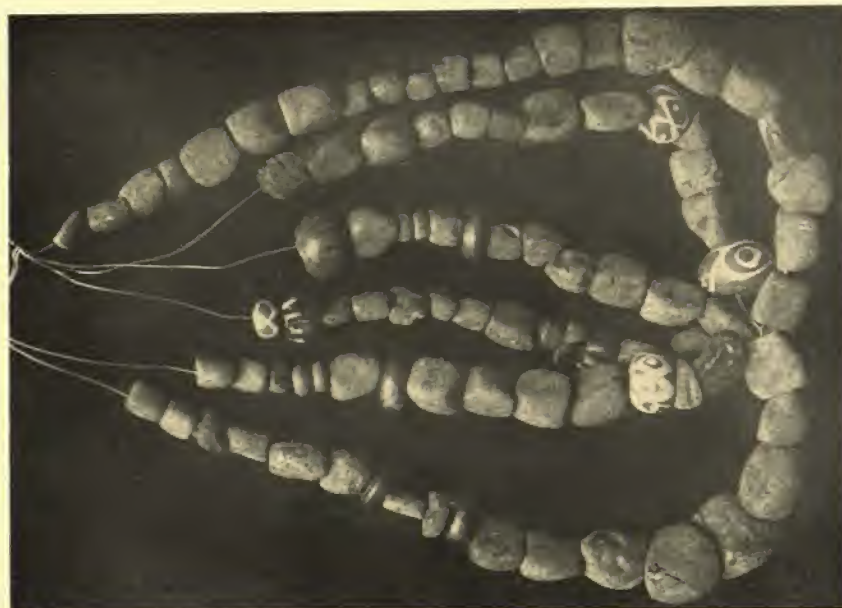


Fig. 3. Necklace of ninety-two Beads of Amber, Glass, and Paste

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NECKLACES.

The necklaces numbered eleven strings of beads, of which eight examples are described.

1. Formed entirely of twenty-two amber beads roughly and irregularly shaped. Amber was evidently much valued, as the smallest pieces were preserved and drilled.

2. A complete necklace of twenty-two perforated pieces of amber, pieces of tubular glass, blue glass beads, a small much-corroded coin, and a circular chalk pendant.

3. Composed of fifteen beads, some of pearl-coloured glass in segments of three, four, and five united beads, amber of irregular size and shape, a small much-oxidized coin, and a pendant of fluted blue glass (pl. xvii, fig. 1, *a*).

4. Formed of thirty-seven beads, principally amber—two are of paste, one ornamented with dots, and the other with twisted zoomorphic pattern (pl. xvii, fig. 1, *b*).

5. Necklace of thirty-five beads of glass and amber, six of the latter being cylindrical (pl. xvii, fig. 2, *a*).

6. Formed of fifty-four amber and one glass bead.

7. Composed of ninety-five beads of glass and amber. The glass beads are variously coloured blue, red, green, and yellow, but the dark ultramarine blue prevails (pl. xvii, fig. 2, *b*).

8. A composite necklace of ninety-two beads, amber, glass, and paste—several of the glass beads are fluted, and the paste beads are ornamented with a variety of twisted zoomorphic patterns (pl. xvii, fig. 3). Beads of similar character and pattern were found at Fairford and Ipswich, the composite pearl beads occurring also at Wheatley and Fairford.

The evidence brought to light at Bidford, judging by the size of the graveyard already explored, the number of bodies, and the wealth and variety of the grave furniture, suggests a much earlier settlement in the heart of the Midlands than has generally been admitted, and the great number of cremation burials does not agree with the theory that the proportion of cremation burials decreases the further the settlements advanced up the valleys of the Thames and its tributaries. The materials show so strong a resemblance to those found in the Anglo-Saxon settlements in the Thames valley and its head-waters, that we are forced to conclude that the West Saxons, after penetrating the Cotswolds, descended into the Avon valley, and established themselves on the north bank of the river Avon at Bidford quite early in the sixth century.

Funds were provided by a grant of £20 from the Society of Antiquaries, and by generous contributions from various friends who were interested in the discoveries; and it is gratifying to record that their gifts were spontaneous, without any appeal having been made. The Birmingham Archaeological Society warmly supported the enterprise, and we would like to record the names of Mrs. Leggett of Stratford-on-Avon; Alderman George Cadbury of Birmingham; Mr. Herbert Miller, Harborne; Mr. Thomas G. Barnett, Rednal; Mr. W. Bolton, Bidford; Mr. S. G. Mason, Bidford, and Mr. H. F. L. Orcutt of Rowington for their welcome help. The handsome contributions of Mr. W. J. Fieldhouse, F.S.A., of Austey Manor, and his kind encouragement, largely assisted in making the enterprise possible. To all we tender sincere thanks.

APPENDIX I

NOTES ON THE CRANIAL AND OTHER SKELETAL CHARACTERS¹

By PROFESSOR JAMES C. BRASH, *University of Birmingham.*

The condition of the bones. The state of preservation of the bones is very uneven. Many are in excellent condition though somewhat brittle from loss of animal matter; others are soft and friable, with flaking and crumbling of the surface. Portions of the same skull or long bone frequently exhibit the extremes of preservation.

Numbers, age, and sex. The number of individuals represented by the bones available for study falls considerably short of the number of interments as otherwise determined. This is due to the presence of urn-burials and to the almost complete disintegration of some of the skeletons. The sexing of the bones has presented no great difficulties; the secondary sex characters of the skulls are on the whole very well marked, and assistance has been obtained in many instances from other parts of the skeleton, and in some from the character of the grave furniture. A number, however, remain doubtful, and it is thought better to record them as such. Beyond a certain point the determination of age must naturally be approximate only. The eruption of the teeth and the condition of the epiphyses are trustworthy guides up to maturity, but thereafter we have to depend on the somewhat fallacious indications of the closure of the skull sutures and the amount of the wear of the teeth. In the following table I have grouped the young skeletons about the ages of 6, 12, and 20, and have placed the remainder in three classes. The 'Mature+' group includes those skeletons which show undoubted signs of beginning age changes, and there is a small group in which these features are so well marked as to indicate old age as compared with the others.

¹ As a result of the further excavations in 1923, the number of individuals represented by skeletal remains has been greatly increased. Unfortunately, however, the condition of the bones is not nearly so good as in the two previous years, and they are not expected to yield much additional information. It is hoped that a full account of the bones will be published in the *Journal of the Royal Anthropological Institute*.

BIDFORD-ON-AVON, 1921-2.

<i>Age</i>	<i>Male</i>	<i>Female</i>	<i>Sex?</i>	<i>Total</i>
6	—	—	7	7
12	—	—	7	7
20	1	4	—	5
Mature	21	13	11	45
Mature +	9	4	5	18
Old	6	3	2	11
				93

It will be noted that the majority fall into the mature class, but that there is a considerable proportion of young persons and an appreciable number of old. It should also be observed that differential wastage of the bones probably accounts for the greater proportion of mature skeletons and for the preponderance of male over female. The conclusion obviously to be drawn from the bones, apart from other evidence, is that we are dealing with the burial-place of a community with a very considerable proportion of children.

The skulls—general characters. Inspection reveals the important fact that there is considerable variation in general form. Sex characters, checked as stated above, are particularly well marked. There is striking variation in the development of the superciliary ridges, which are very well developed in most of the males and very markedly so in a few. There are three examples of the metopic suture, and noteworthy is the number of pterionic and bregmatic ossicles and the presence in a considerable proportion of an obelionic depression. The usual asymmetry of the skull is present in degree worthy of comment. This affects the occipital region as a whole, the occipital condyles, the mastoid processes, the glenoid articular cavities, and the posterior border of the palate. It is to be attributed to asymmetry in development of the occipital portions of the cerebral hemispheres, with individual habits in the action of the jaws and in the general poise of the head.

Cranial capacity. Direct estimate is possible only in a few, and Lee's formulae have been employed. The males vary from 1,686 c.c. to 1,425 c.c. with an average of 1,568 c.c., the females from 1,399 c.c. to 1,287 c.c. with an average of 1,353 c.c. The high average capacity and the high sex ratio are to be noted.

Cephalic index. The range is from 70.1 to 77.6 with an average of 73, but this statement is somewhat misleading unless corrected by a note of the variations in the shape of the skull in *norma verticalis*. There are found to be marked differences in the amount of parietal bulge, so striking in the well-characterized males as to lead to an initial distinction of two types best described as 'ovoid' and 'ellipsoid'. The former, as is to be expected, has the higher cephalic index, the distinction coming for practical purposes at the junction of the mesaticephalic and dolichocephalic classes at 75. From the point of view of the form there are surprisingly few intermediate shapes, at least so far as the males are concerned. It is interesting to note that there are corresponding differences in the breadth-height index, which varies from 86.7 to 103.8, and though hardly sufficiently characterized to fall clearly within the platychamaecephalic and hypsistenocephalic groups of Turner, yet there is no doubt that from this point of view a distinction can be made between the 'ovoid' group which are relatively broad and low, and the 'ellipsoid' which are relatively high and narrow. Some of the latter have distinct sagittal ridging, whereas the former on inspection appear to be flattened on the vertex. That it is in fact parietal expansion that is the cause of the difference is further emphasized by a comparison of the minimum frontal diameters and by the fact that nearly all the skulls appear to be equally phenozygous.

The relation of the face to the calvaria. The skulls as a whole are orthognathous. The calculation of Flower's gnathic index places only one individual across the line into the mesognathous class. The objection to the gnathic index, that it does not take account of the length of the face, is well known, and it is therefore well to state that as measured in projection by means of the Frankfurt profile angle there is revealed a tendency to slight prognathism that is not suggested by the index. This is of interest in connexion with the observations of Horton-Smith on West Saxons in 1896, and is to be associated with the characters of the nasal aperture in the present series.

The proportions of the face. The numbers are too small to warrant any statement of the relation of the facial proportions to the two types of skull. The upper facial and the complete facial indices agree in making the face as a whole relatively narrow (leptoprosopic); this is in conformity with the cephalic index, and the type is therefore harmonic. This statement, however, has again to be corrected by the remark that owing to the notable width of the mandibles the lower part of the face appears almost as broad as the upper. Taken in conjunction with the broad chin and the strong development of the eyebrow region, this imparts to the whole face a somewhat characteristic 'determined' appearance. The spreading of the mandible, associated with powerful temporal muscles, the phenozygous character of the skulls, and a high position of the temporal lines, probably itself depends upon the great width of the palate. It is best marked in the 'ovoid' type which also possesses a particular type of palate.

The palate. The palato-maxillary index of Flower varies from 103.4 to 127.3 with an average of 116.1, and when it is added that the average palato-maxillary length is 54.6 and the breadth 63.3 mm. in twenty-four complete palates including both sexes, the comment that must be made is that we are dealing here with palates large in both dimensions but specially so in breadth and therefore notably brachyuranic. But again observation has to supplement measurement. There are in fact two distinct types of palate outline to be recognized, clearly associated with the two types of skull. With the ovoid type of skull is found a palate of perfect horseshoe type with a well-rounded anterior portion and the greatest breadth conspicuously opposite the second molars; with the ellipsoid type the palate is as conspicuously 'squared' in front so that the incisors and canines are nearly in a straight line, and from the canines, which stand at a distinct antero-lateral angle, the posterior part passes nearly straight backwards with a tendency in a few even to slight outward divergence.

The dental index, with an average of 40.1, clearly places these skulls in the microdont class, only one example being found in each of the mesodont and macrodont classes. This fact, taken in conjunction with the state of the teeth, warrants the inference that it is to use of the jaws that the character of the palates is due. It is right to add that deformity of the palate, though rare, is not unknown, there being one example of high narrow palate with markedly projecting incisors. Dental caries is conspicuous by its rarity, and the characteristic pathological lesion is root abscess due to excessive wear.

The orbital aperture. There is marked variation in the shape of the orbital aperture. A high orbit is characteristic of the female skulls, and a low (microseme) orbit is found in the males with the most highly developed superciliary ridges.

The nasal aperture. The nasal index varies from 40.3 to 54 with an average of 46.7. While therefore the skulls as a whole are leptorrhine, it must be noted that there is a distinct tendency to broadening of the nasal aperture. Of the twenty-one skulls in which this index could be accurately determined there are in fact fourteen leptorrhine, five mesorrhine, and two just over the platyrrhine border, both females. Now in addition to this, it is found on examination of the lower border of the nasal aperture that only in a very small proportion is the floor of the nose sharply demarcated from the infranasal surface of the maxillae. There is present in some degree in nearly all the skulls the grooved continuity of nasal floor and infranasal surface that is observed in prognathous and platyrrhine skulls. This continuity varies from a mere

indication of a prenasal fossa by separation of the two oblique lines which limit it to a well-marked anteroposterior groove associated with a small nasal spine and absence of the sharp lower border of the nasal aperture. These conditions of the nasal aperture are probably to be associated with the tendency to projection of the face already noted and the large average size of the palate. The combination of characters constitutes an arresting feature of the skulls.

The vertebral column. Asymmetrical variations are frequent at the lumbo-sacral junction, and there would appear to be an undue proportion of anomalous sacra of four or six segments.

The limb bones. In general, the limb bones exhibit great variation in strength and muscular markings, sex characters being again clearly marked. There is a high proportion of supratrochlear foramen of the humerus. There are numerous examples of the third trochanter and of the hypotrochanteric fossa of the femur, and the femora as a whole exhibit a slight degree of flattening of the shaft below the small trochanter (platymeria), but no excessive development of the linea aspera (pilastre). Torsion of the shaft is very variable. A variable degree of retroversion of the head of the tibia is present, and there is on the whole an increase of the torsion of its shaft. The platynemic condition of lateral compression of the upper part of the shaft of the tibia is present in many, though not to a marked degree.

Squatting facets. In addition to the characters of the tibia just mentioned there is evidence of the squatting habit in nearly all of the lower limb bones. There is a marked excavation of the upper aspect of the neck of the femur with a corresponding depression on the rim of the acetabular articular cavity. Bony contact following osteoarthritis is proved by the presence of eburnation in one specimen in this situation, and provides strong evidence of the nature of these constant markings. There is extension of the medial condylar articular surface of the femur (Charles's facet). Facets on the anterior margin of the lower end of the tibia and corresponding facets on the neck of the astragalus are present in nearly all the bones.

Proportions of the limbs. Although the numbers are too small to draw any general conclusion, it is noteworthy that in one individual the proportions of the radius and the tibia compared respectively with the humerus and the femur are high.

The stature. The stature has been calculated by means of Pearson's formulae with the results shown in the following table, to which are added Pearson's figures for 'Anglo-Saxon' stature in general, and Galton and Pearson's figures for modern English stature:

STATURE TABLE

WEST SAXONS. BIDFORD-ON-AVON, 1921-2

	Male	Female
Maximum	182.7 cm. (5' 11 $\frac{9}{16}$ ")	163.1 cm. (5' 4")
Minimum	165.5 cm. (5' 5")	148.7 cm. (4' 10 $\frac{1}{2}$ ")
Mean	170.64 cm. (5' 7 $\frac{1}{5}$ ")	154.9 cm. (5' 1")

ANGLO-SAXONS (Pearson)

Mean	170.9 cm.	156.0 cm.
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MODERN ENGLISH (Galton and Pearson)

Commonalty	170.0 cm.	158.3 cm.
Middle Classes	172.7 cm.	159.75 cm.

Individual statures are of course approximate only, but the means may be taken as accurate. It will be noted that there is close agreement between the stature of the Bidford

Saxons and Pearson's general figures, with a slight increase of the high sex *ratio* commented on by Pearson.

Pathological conditions present. There is no evidence of healed fractures or of any injuries that might have caused death. One of the skulls exhibits a remarkable aperture at the anteroinferior corner of the left parietal at the bottom of a sloping depression with evidence of antemortem healing : the evidence seems to point to this being an example of trephining. As already stated, there are only a few instances of dental caries, but dental abscess is common in the older jaws. Osteoarthritis is common, affecting the vertebral column with occasional fusion of adjacent vertebrae, most of the limb articulations, and in one instance the temporomandibular joint. There is a remarkable example of disuse atrophy of the right upper limb, the bones of the other side being available for comparison. This may have been due to some form of early injury, but in the opinion of those qualified to judge the appearances suggest infantile paralysis (poliomyelitis). When the proportion of children found is recollected, it is perhaps legitimate to speculate that this disease may have been epidemic.

Summary. Sex characters are markedly differentiated in the features of the skulls, the cranial capacity, the character of the limb bones, and in the stature.

There are two types of skull to be recognized. 1. Ovoid with breadth in the parietal region and a mesaticephalic index, the breadth greater in proportion to the height, a horseshoe type of palate, and a markedly 'square' face. 2. Ellipsoid with dolichocephalic index, height great in proportion to the breadth, a rectangular type of palate, and a narrower mandible. The palates as a whole are large, especially in the transverse direction. There is a tendency to projection of the face as a whole, and to breadth of the nasal aperture associated with lack of sharp demarcation of its lower border.

The squatting habit is clearly indicated by the characters of the lower limb bones, and the average stature is found to agree within a few millimetres with Pearson's general 'Anglo-Saxon' estimate.

APPENDIX II

DETAILS OF GRAVES AND GRAVE FURNITURE.

No.	Depth.	Feet to	Sex. ¹	Spear or Favelin.	Knife.	Umbo.	Brooches.	Beads.	Rings.	Toilet Imple- ments.	Other Furniture and Remarks.
1	c. 2' 6"	E.	—	—	—	—	—	—	—	—	A small fragment of black pottery and a piece of clear white glass.
1a	c. 2' 6"	SE.	M	S	—	—	—	—	—	—	Two small fragments of pottery.
2	c. 1' 6"	—	M	—	—	—	—	—	—	—	URN (broken), fragment of bronze inside.
3	c. 1' 6"	—	—	—	—	—	—	—	—	—	URN (broken).
4-5	2' 9"	NE.	M	S (no. 4)	—	—	—	—	—	—	Situla (no. 7) with 4 bronze bands and handle. 2 small bronze-eyed pins (no. 9). A spear-head (no. 6) 1' 6" to left.
6-9	—	NE.	Child	—	—	—	—	—	—	—	Feet 3' 6" deep.
10, 15	2' 9"	N.	F	—	K	—	2*	—	—	—	Near, bronze ring and fragment of rim (no. 12).
11-12	2' 6"	N. (?)	—	—	—	—	—	—	—	—	Coin-like pendant, circlet of white shell; portion of bronze plated scabbard (?); a twisted circlet of bronze, twisted bronze ring, and a bone needle for netting.
13	—	N.	F	—	—	—	2 §	glass and amber	—	—	10 years of age.
14	—	NNW.	Child	—	—	—	—	—	—	—	URN.
16	2' 0"	—	—	—	—	—	—	—	—	—	2 small bronze clips inside left femur.
17	—	N.	M	S	—	—	—	—	—	—	Bronze buckle with iron tang.
18-19	—	NE.	M	S	K	U (18)	—	—	—	—	URN (broken).
20	2' 0"	—	—	—	—	—	1*	—	—	—	BRONZE BOWL, and saucer-shaped brooch (22) at side.
21-22	3' 2"	—	—	—	—	—	—	—	—	—	URN (broken).
23	1' 17"	—	—	—	—	—	—	—	—	—	URN (broken), small pieces of bronze and iron (like a nail), bone comb, and iron knife inside.
24	2' 6"	E.	M (?)	—	K	—	—	—	—	—	Charcoal over pelvis, and a thin fragment of bronze near pelvis.
25	2' 0"	—	(F)	—	K	—	—	—	—	—	
26	2' 9"	NE.	—	—	—	—	—	—	—	—	
27	3' 0"	NNE.	F	—	K	—	2 †	amb. and glass	—	—	

* Saucer-shaped.

† Cruciform.

§ Disc-shaped.

1 Brackets in this column indicate that the sex appears to be indicated by the grave furniture.

AN ANGLO-SAXON CEMETERY AT

No.	Depth.	Feet to	Sex.	Spear or Facelin.	Knife.	Umbo.	Brooches.	Beads.	Rings.	Toilet Imple- ments.	Other Furniture and Remarks.
28	3' 5"	NNE.	F	—	K with bronze ferrule	—	2 **	amber and glass	3 silver spiral	ear-pick, tweezers, 2 prickers, on ring (bronze)	Portion of box (?) with unguent (?) inside.
29	3' 0"	ESE.	—	—	K	—	—	—	—	—	URN (much broken).
30	3' 0"	SE.	Child	—	—	—	—	—	—	—	—
31	1' 6"	—	Child	—	—	—	—	—	—	—	—
32	—	N.	M	S	K	U, handle 2 rivets	—	—	—	—	Bronze clip near umbo.
33	3' 2"	NNW.	—	—	—	—	—	—	—	—	—
34	6' 0"	—	—	—	—	—	—	—	—	—	Fragment of skull only and a few bones. An iron object and numerous pieces of pottery.
35	3' 8"	E.	F	—	K	—	2 *	96 amber and other	—	—	On breast a girdle attachment with 3 silver studs.
36	2' 2"	N.	—	—	K	—	—	—	—	—	Knife with ? haft with 2 bronze silvered studs, and iron.
37	3' 0"	NE.	—	—	K	—	—	—	—	—	URN.
38	2' 4"	—	—	—	—	—	—	—	—	—	URN (base only, much broken).
39	1' 8"	—	—	—	—	—	—	—	—	—	Iron object on left side under arm : pieces of bronze, some contain- ing rivets across waist ; part of iron buckle and fragments of iron, all forming part of girdle.
40	2' 9"	SE.	F	—	—	—	2 †	1 glass	—	—	Fragments of pottery (urn dis- placed by no. 42).
41	—	—	—	—	—	—	—	—	—	—	2 pieces of flat bronze, bent, near rivets of umbo.
42	3' 0"	SE.	M	S and fer- rule?	K ?	U, handle 5 rivets	—	—	—	—	Bones mostly missing. Fragments of iron overlying pelvis.
43	3' 10"	—	F	—	K ?	—	2 §§	amb. and paste, 2 bronze discs	—	—	—
44	3' 6"	N.	—	—	K	—	—	—	—	—	Skull and bones only.
45	2' 10"	N. (?)	—	—	—	—	—	—	—	—	—

** Annular.

* Saucer-shaped.

§§ Penannular.

No.	Depth.	Feet to	Sex.	Spear or Javelin.	Knife.	Umbo.	Brooches.	Beads.	Rings.	Toilet Imple- ments.	Other Furniture and Remarks.
46	2' 7"	N.	F	—	—	—	—	amber paste and glass amber	—	—	Charcoal in area of pelvis.
47	3' 5"	NE.	F	—	—	—	2 †	—	—	—	Triangular piece of bronze, with 2 small wire rings at corners, eyed pin and 7 fragments, rect- angular piece of bronze turned under at ends, with punched ornament, each end riveted.
48	3' 10"	N.	M	S (14 inch)	K	U, handle	—	—	—	—	Iron girdle buckle with small pieces of bronze, piece of lead D-shaped. Some fragments of pottery. Girdle buckle.
49	2' 10"	E.	F	—	—	—	2 §	—	—	—	
50	2' 10"	NNW.	M	S and J	K	U, handle 3 rivets	—	—	—	—	
51	3' 6"	NNW.	F	—	—	—	—	—	—	—	On right side of chin 2 thin bronze rings in one of which was prob- ably set a piece of garnet cut <i>en cabochon</i> . Near left foot a small pointed piece of bronze. Iron shears; bronze ferrule, iron purse- mount (?).
52	3' 1"	NW.	F	—	—	—	2 †	amber paste	—	T. I. →	Bronze-eyed pricker below one of the brooches: traces of perished bronze items between some of the beads.
53	2' 3"	N.	M	—	—	—	—	—	—	—	
54	2' 5"	N.	M	S	—	U, handle	—	—	—	—	
55	2' 8"	—	—	—	—	—	—	—	—	—	URN, lozenge-shaped and rosette ornaments with lines between. 12 projecting bosses.
56	3' 0"	S.	—	—	—	—	—	—	—	—	
57	2' 0"	SSE.	Child	—	K	—	—	—	—	—	
58	2' 9"	N.	—	—	K	—	—	—	—	—	
59	2' 9"	NNE.	M	S	K	—	—	—	—	—	Whole covered by layer of char- coal.
60	2' 7"	ENE.	—	—	K	—	—	—	—	—	
61	3' 0"	NE.	—	—	—	—	—	—	—	—	Iron girdle buckle. URN, broken, fragments of bronze, 2 pieces of bone comb decorated with incised circles.
62	2' 0"	—	(F)	—	—	—	—	—	—	—	Bronze-eyed pricker.
63	3' 2"	N.	F	—	—	—	2 §	1 amber	—	T. I.	
64	2' 3"	—	(M)	S	—	—	—	—	—	—	

§ Disc-shaped.

† Cruciform.

No.	Depth.	Feet to	Sex.	Spear or Favelin.	Knife.	Umbo.	Brooches.	Beads.	Rings.	Toilet Imple- ments.	Other Furniture and Remarks.
65	3' 7"	E.	M	S	K	—	—	—	—	—	Near right shoulder bronze twee- zers (?) with central plate, portion of iron girdle buckle.
66	4' 3"	N.	M	S	K	—	—	—	—	—	Part of iron girdle buckle.
67	3' 2"	N.	—	—	—	—	—	—	—	—	Charcoal near head.
68	3' 0"	—	—	—	—	—	—	—	—	—	URN, ornamented with rosettes and inverted triangles pendent from shoulder line. Broken.
69	3' 7"	N.	M	S and J	K	U, 4 rivets	—	—	—	—	Iron girdle buckle.
70	4' 5"	NNE.	M	S and fer- rule 4' 3"	K	—	—	—	—	—	Iron buckle, and a piece of pottery with ornament found below body.
71	4' 2"	E.	—	—	—	—	—	—	—	—	Charcoal much in evidence.
72	2' 0"	—	(F)	—	—	—	—	—	—	—	URN, fragments of bone comb.
73	4' 0"	—	—	—	—	—	—	—	—	—	L-shaped piece of iron.
74	3' 9"	N.	—	—	K	—	—	—	—	—	Charcoal between legs.
75	4' 3"	N.	F	—	—	—	2 †	6 paste	—	—	Fragments of urn found near and above, fragments of bronze, char- coal and wood, pieces of iron.
76	4' 0"	SE.	F	—	K	—	2 †	amber and paste	—	—	Bronze tweezer-shaped clip, riveted, inside left knee, bronze hair (?) ornament lying across below chin, fragments of wood, iron and bronze on waist-line. Under knife were fragments of wood, iron, bronze and (?) leather.
77	2' 4"	—	—	—	—	—	—	—	—	—	URN (broken).
78	2' 9"	NW.	—	—	K	—	—	—	—	—	Bronze object attached to a ring over upper end of right femur.
79	3' 3"	N.	F	—	K	—	2 *	24 amb.	—	—	STYULA at right shoulder. Charcoal between legs. Bronze pin across breast. Iron buckle (?). Arrow- head overlying this body, 20" from surface. Considerable amount of pottery overlying it.
80	2' 7"	—	—	—	—	—	—	—	—	—	URN.
81	3' 0"	N.	F	—	K ?	—	—	amber and paste	—	—	Bronze pin below chin: a round and a triangular pierced ornament, bronze, below chin, a ring below the former; portions of buckle with bronze item.

* Saucer-shaped.

† Cruciform.

BIDFORD-ON-AVON, WARWICKSHIRE

115

No.	Depth.	Feet to	Sex.	Spear or Javelin.	Knife.	Umbo.	Brooches.	Beads	Rings.	Toilet Imple- ments.	Other Furniture and Remarks.
82	4' 0"	NW.	F	—	K	—	2 *	7 paste 1 amber	—	—	Buckle and piece of bronze on left hip, with woven material visible; below left of chin iron pin (?) in pieces, with fabric attached.
83	3' 9"	NNW.	—	—	K	—	—	—	—	—	Charcoal in neighbourhood.
83a	—	NE.	—	—	—	—	—	—	—	—	Charcoal to right of and above feet.
84	3' 7"	SSE.	—	—	—	—	—	—	—	—	Small earthenware cup on right of skull.
85	3' 9"	E.	—	—	—	—	—	—	—	—	2 bronze bands from SITULA, 5" above and 6" to the right of skull; a bronze girdle buckle and another (?) in 2 pieces. 1
86	3' 0"	NNE.	—	—	—	—	—	—	—	—	saucer brooch between femora.
87	2' 0"	NE.	F?	—	—	—	—	—	—	—	Pieces of iron. Charcoal.
88	3' 0"	NE.	F	—	K	—	2 ††, 1 †	amber pa. glass	R silver	—	5 pieces of iron on breast; bronze fragments.
89	2' 6"	NE.	—	—	K	—	2 *	—	—	—	Charcoal in neighbourhood.
90	2' 8"	E.	F	—	—	—	—	am. pa. gl.	—	—	Fragments of skull only. 3 years old.
91	3' 0"	E.	Child	—	—	—	—	—	—	—	Much charcoal.
91a	—	—	M	—	—	—	—	—	—	—	Piece of bronze buckle on right collar bone; bronze buckle, height 3' 0".
92	2' 9"	NNE.	F	S	—	—	—	am. gl. pa.	—	—	Barbed iron arrow-head with hol- low socket.
93	2' 7"	E.	Child of 5	—	—	—	—	—	—	—	Fragments of silver ornament, and pin set with garnet under skull.
94	3' 1"	E.	—	—	—	—	—	—	—	—	URN, base only, much broken.
95	1' 0"	—	—	—	—	—	—	—	—	—	5-6 years old.
96	3' 2"	N.	F Child	—	K	—	—	—	—	—	Fragments of silver pin ornament with sapphire(?). Iron imple- ment at waist. Small bronze box close to W. side of knees, and several broken pieces of cor- roded iron.
97	1' 7"	—	—	—	—	—	Roman	—	—	—	URN, base only, much broken.
98	2' 0"	—	—	—	—	—	—	—	—	—	
99	2' 9"	N.	Child	—	—	—	—	—	—	—	
100	2' 10"	N.	Child of 8	—	K	—	—	paste and glass	—	—	
101	1' 6"	—	—	—	—	—	—	—	—	—	

* Saucer-shaped.

†† Applied.

+ Cruciform.

No.	Depth.	Feet to	Sex.	Spear or Javelin.	Knife.	Umbo.	Brooches.	Beads.	Rings.	Toilet Imple- ments.	Other Furniture and Remarks.
102	3' 2"	N.	—	—	—	—	—	—	—	—	Leg bones only.
103	3' 4"	NNW.	F	—	K	—	2 § (not a pair)	1 green glass in bronze setting	—	—	A bronze clasp near each hand.
104	2' 6"	NNW.	—	—	—	—	—	—	—	—	Below a deposit of charcoal.
105	2' 0"	NNW.	M (?)	S (?)	—	—	—	—	—	—	Fragment of metal on breast: key (?)
106	3' 4"	E.	—	—	—	—	—	—	—	—	and another piece of iron inside
107	3' 0"	N.	M	S	K	—	—	—	—	—	right arm below elbow.
108	3' 10"	N.	—	—	K	—	—	—	—	—	Charcoal overlying body.
109	2' 6"	E.	—	—	—	—	—	—	—	—	Fragment of iron. 2 fragments of black pottery below body.
110	2' 6"	S.	Child	—	—	—	—	—	—	—	Girdle knife on right side of
111	2' 8"	E.	Child	—	—	—	—	—	—	—	pelvis with part of (?) bone
112	2' 6"	SE.	—	—	2 K	—	—	—	—	—	handle remaining and part of bronze ferrule; a smaller knife with it.

§ Disc-shaped.

PLAN OF THE ANGLO-SAXON CEMETERY AT BIDFORD-ON-AVON, WARWICKSHIRE,

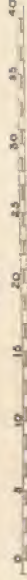
EXCAVATED DURING THE SUMMER OF 1922.

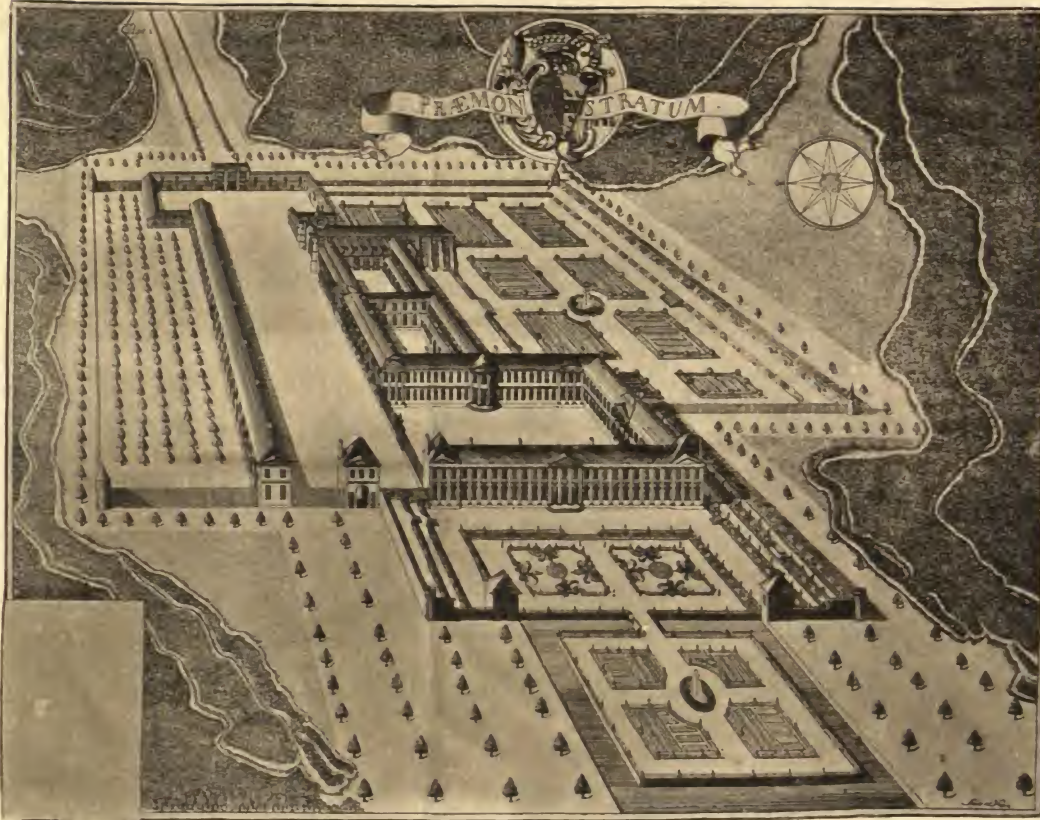
SURVEYED BY FREDERICK C. WELLS, F.R.S.

BOWLING GREEN

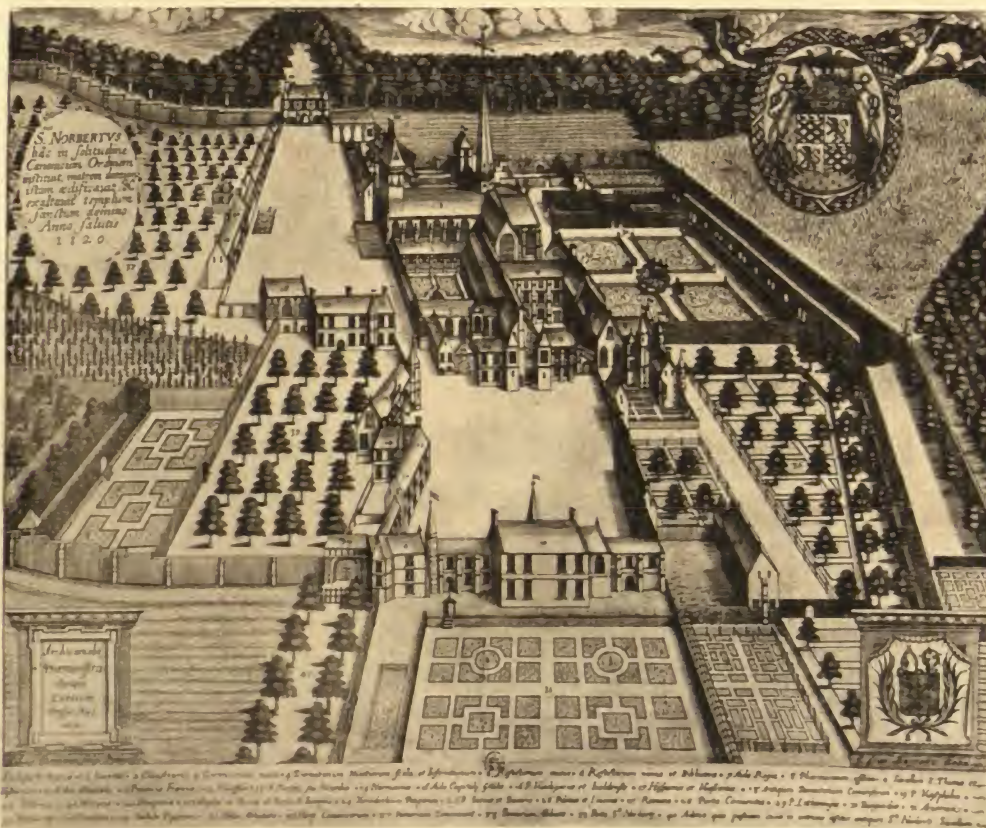


Scale





Prémontré in 1734: from Hugo *Annales*



Prémontré in 1656: from a print in the Bibliothèque nationale, Paris

VI.—*The Architecture of the Premonstratensians, with special reference to their Buildings in England.* By A. W. CLAPHAM, Esq., F.S.A.

Read 12th April 1923.

IT has been more than once remarked that the study of medieval monastic architecture and arrangement can be better studied in this country than anywhere on the continent of Europe, and for this there are several sufficient reasons. In England the Reformation, and with it the suppression of the monasteries, coincided in date with the general abandonment of Gothic architecture and the dawn of the English Renaissance. Consequently, any surviving remains of a monastic house in this country (except where the buildings were converted into a mansion) are of the period when monachism was a living force, and before its vitality had been sapped by the commendatory system of government and its architecture translated into the foreign language of the Renaissance. Furthermore, compared with the continent, this country, after the Reformation, suffered comparatively little from the effects of civil strife; such strife as took place was less religious than political, and in it the monasteries had been too long untenanted to be a symbol of Romanism and called forth no animosity even in the Puritan soldiery. The matter was quite otherwise in both France and Germany, where the wars of religion inflicted grievous harm on the corpus of ecclesiastical building when the pendulum swung to the Protestant side. The wider tolerance of the later seventeenth and of the eighteenth century was even more destructive, in these countries, to monastic architecture of the middle ages, for with a more settled social state a new era of monastic building began which transformed the vast majority of French, Belgian, and South German convents into examples, often magnificent enough, of the contemporary Renaissance style in which all trace of the medieval arrangement is lost.

Two orders aimed from their origin at the establishment of monastic houses remote from any city and, by preference, in a position as inaccessible as possible, and it is in these orders that the buildings of the middle ages have the best chance of survival, the material of their structure being only of service for the repair of scattered farms and cottages. Of these two orders the Cistercian has,

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architecturally, received more attention than any other monastic body, but the Premonstratensian, as a whole, has been neglected. No comprehensive account of its building activities has ever been attempted, and adequate descriptions even of individual houses are not common, though in this country the labours of the late Sir William Hope embraced the excavation and description of five of the English abbeys of the order.

The intention of the present paper is to attempt to supply, in a small degree, the lack of a general survey of the subject—to pass in review the extant remains of the order in England, and lastly to call special attention to two houses in particular, Croxton and Leiston, the former recently excavated by our Fellow Lord Granby, and the latter still an imposing ruin, which has not before been systematically described or planned.

THE INCEPTION AND DISTRIBUTION OF THE ORDER.

The Premonstratensian Order was founded by St. Norbert (canonized in 1582), a native of Xanten on the lower Rhine, as a reformed branch of the Canons Regular of St. Augustine. The canons regular produced numerous reformed congregations or branches during the early years of the twelfth century, and of these a certain number, such as those of St. Nicholas of Arrouaise, St. Victor of Paris, and the Holy Sepulchre of Jerusalem, were represented in this country, while others did not spread beyond their country of origin. In any case none of these lesser congregations rose to the status of an order, and the ties binding their various houses to the *caput ordinis* and to one another were of little strength at the beginning and ever tended to loosen. The Premonstratensians, on the other hand, basing their system on that of the Cistercians, achieved a stability and cohesion which survived such shocks as the Hundred Years' War, and subsisted in theory and to a less extent in practice until the eve of the Reformation, when the English houses were finally freed from foreign control by bull of pope Julius II in 1512. St. Norbert founded his first house at Prémontré (diocese of Laon, dep. of Aisne) in 1121, and this was very shortly followed by others, including the three at St. Martin, Laon, Floreffe (diocese of Liège, Namur), and Cuissy (diocese of Laon, dep. of Aisne) on the Aisne, the superiors of which held a position in the order analogous to that held by the abbots of the four chief daughters of Cîteaux among the Cistercians. These superiors were known as 'Primarii ordinis patres', and held the offices of Prior, Sub-prior, and Circator of the order, under its head the Abbot of Prémontré. On his elevation to the metropolitan see of Magdeburg Norbert founded the abbey of our Lady in that city, which became a centre of Premonstratensian influence in

middle Europe. The constitution of the order was based on the Cistercian system of affiliation and the abbot of the mother house superintended the election of the abbots of the daughter houses. The rapid extension of the order, however, soon rendered some subdivision necessary and the Premonstratensian houses were grouped, geographically rather than politically, into districts known as Circaries, each presided over by a Vicar-General. These Circaries (which varied slightly in name and extent at different times) eventually numbered twenty-nine or thirty¹ and were not equally populous, the districts where the order was most in favour being north-east France, Lorraine, the Low Countries, Germany, Poland, Bohemia, Hungary, and Spain; there were few houses in southern and western France, Italy, and Scandinavia, and a medium number in the British Islands.

The order held its chapter-general on St. Denis day (9th October) each year, and at these chapters the head of every house was supposed to attend. Literal observance of this rule soon became impossible and it was relaxed on more than one occasion and eventually became almost a dead letter.

At the inception of the order the houses established by St. Norbert were of the dual type for canons and sisters,² a practice which was permanently established in the middle ages in only two monastic orders, the Gilbertine and the Bridgettine. Among the Premonstratensians it was generally abandoned before the close of the century, though the practice lingered for some time longer in Germany, where dual abbeys were founded as late as the thirteenth century.³ Brodholm (Nottinghamshire), an affiliation of Newhouse and consequently of later date than 1143, was also founded as a double house.⁴ This very ephemeral practice has apparently left no trace in any of the surviving buildings of the order.

The statutes of the Premonstratensian chapter-general contain no instructions as to the arrangement and no prohibition as to the ornaments of the houses of the order, such as occur in the Cistercian statutes. One statute, however, ordains that no abbey shall be founded in a town save with the consent of the chapter-general or the abbot-general, and that no two houses shall be founded

¹ C. L. Hugo, *Sacri et Canonici Ordinis Premonstratensis Annales* (1734), i, preface. The circaries were as follows:—1. France, 2. Floreffe, 3. Ponthieu, 4. Brabant, 5. Flanders, 6. Westphalia, 7. Wadgassen, 8. Ilfeld, 9. Lorraine, 10. N. England and Scotland, 11. Mid. England, 12. S. England, 13. Ireland, 14. Normandy, 15. Gascony, 16. Spain, 17. Burgundy, 18. Auvergne, 19. Friesland, 20. Suabia and Bavaria, 21. Bohemia and Moravia, 22. Poland, 23. Livonia, 24. Hungary, 25. Denmark and Norway, 26. Slavonia, 27. Greece and Jerusalem, 28. Rome, 29. Saxony.

² J. E. Jansen, *La Belgique Norbertine* (1920), i, p. 71, and *Analectes O. P.* ix (1913).

³ D. U. Berlière, 'Les Monastères doubles aux XII^e et XIII^e siècles' in *Mémoires de l'Académie royale de Belgique*, 2nd Series, vol. xviii (1923).

⁴ *Mon. Angl.*, edit. 1830, vi, p. 919.

within two leagues of one another.¹ For a study of the buildings of the order, therefore, an examination of the surviving remains is the only guide. Hugo, Abbot of Étival, in his history of the order gives a list of some 650 houses, but a large number of these were rather pious intentions than accomplished facts, and the fourteenth- or fifteenth-century estimate of 322, in the *Collectanea Premonstratensia*,² is probably more nearly accurate. Even, however, at the lowest estimate it is obvious that a detailed examination of so vast a mass of building would be an impossible task and it is consequently necessary to base one's conclusions on a study of the most important surviving buildings in each country, giving special attention to those houses of earliest foundation and in immediate connexion with the head of the order. The close connexion of Norbert with St. Bernard of Clairvaux and the great influence which the latter exercised over the foundation of Norbert's order is reflected in certain Cistercian characteristics in Premonstratensian building; in fact practically all the peculiarities observable in the conventual planning of the younger order are borrowed from the Cistercian and are amply sufficient to differentiate the early French houses from the contemporary Benedictine and Cluniac buildings. The purely architectural side of the subject will be best approached, first by a study of the planning of the conventual church, and secondly by an examination of the arrangement of the domestic buildings.

THE CHURCH.

The earliest churches built under St. Norbert appear to have been all of a temporary nature and to have been a similar type of structure to those raised at Clairvaux and Pontigny by the first Cistercians.³ At Prémontré it is recorded by Abbot Hugh des Fossés (Norbert's successor) that the first church was built in nine months.⁴ The second church was begun under Hugh himself about 1150. The same thing happened at St. Martin, Laon (founded 1124) and at Floreffe (founded 1121), where new churches were begun about 1150-60⁵ and 1165⁶ respectively. The primitive church at Floreffe remained standing until the end of the seventeenth century. At Magdeburg the church of St. Mary was already in existence when the abbey was founded⁷ and has con-

¹ Jansen, *op. cit.*, i, p. 187, and *Statuta Dist.* iv, c. x.

² *Collectanea Anglo-Premonstratensia* (R. Hist. Soc.), i, p. 222.

³ J. Bilson, 'The Architecture of the Cistercians', *Arch. Jour.* lxvi, pp. 200-1.

⁴ Ed. Fleury, *Antiquités du département de l'Aisne* (1877-82), ii, pp. 178-9.

⁵ *Congrès Archéologique de France* (Rheims, 1912), lxxviii, p. 225.

⁶ R. Maere, 'L'Église du Petit-Séminaire de Floreffe', *Bull. Acad. royale d'Arch. Belge* (1910), p. 190.

⁷ M. Modde, *Unser Lieben Frauen Kloster in Magdeburg* (1911), with plan.

sequently no bearing on the subject. At Dommartin (founded 1125) the abbey was removed to a new site in 1163.¹ None of the German churches of the order appears to date from before the middle of the twelfth century, so that the features of the earliest Premonstratensian churches cannot be recovered.

Of the churches of the second period there are numerous and important examples, though unfortunately of the four chief abbeys the church of St. Martin, Laon, alone remains largely intact; Prémontré has been entirely destroyed, Floreffe was largely remodelled in the seventeenth and eighteenth centuries, and Cuissy entirely rebuilt in 1687.² The second church of Prémontré, as has been said, was begun in 1150, and this was substantially the building that survived until the period of the Revolution. Its general arrangements are preserved in a series of engravings, the most important of which is dated 1656 (pl. xix).³ It consisted of an aisled nave of seven or eight bays, transepts, and an aisleless presbytery of deep projection (the engraving in Hugo shows four bays) and with a square east end. The original building appears to have been unprovided with a masonry tower, though one was subsequently added over the west bay of the nave. Chapels east of the transept are not indicated in either of the engravings but this is no argument for their non-existence. From this description it will be seen that the church was of a normal Cistercian type of which the distinctive external features were the square east end and the absence of a masonry tower. The church of St. Martin, Laon,⁴ is of very similar plan to Prémontré and consists of an aisled nave of nine bays, transepts with three square chapels in each arm, and an aisleless presbytery with a square east end; later alterations include most of the stone vaulting of the transepts and nave and a fourteenth-century west front. The church has an internal length of 76 metres (249 ft.). Other churches of this type exist at La Lucerne⁵ (diocese Avranches, dep. Manche), where the church was begun in 1164 and the high altar consecrated in 1178; it had two chapels in each arm and a tower over the crossing; Beauport⁶ (diocese St. Briec, dep. Côtes-du-Nord) founded in 1201 and built shortly after on a similar plan to La

¹ C. Enlart, *Monuments religieux de l'Architecture romane et de la transition dans la région picarde* (1895), with plan.

² Hugo, *op. cit.*, i, sub Cuissy.

³ The origin of this engraving is unknown. A second engraving in Hugo's history of the order shows the buildings after the reconstruction of the domestic part of the convent. The existing building, apparently the abbot's house, is a fine Renaissance structure classed as a 'Monument historique' and is used as a Lunatic Asylum.

⁴ Plans in *Congrès Archéologique de France*, 1912, and *Bull. Soc. Acad. de Laon*, xviii, p. 161. The projections at the ends and sides of the presbytery are a local feature, not uncommon in the churches of the Laonnais and Soissonnais.

⁵ Plan in *L'Annuaire de l'Association Normande* (1911), p. 20.

⁶ *Bull. Monumental*, xvi (1850), p. 437. Plan in A. de Caumont, *Abécédaire (civil et militaire)*, 1858, p. 26.

Lucerne, Parc¹ (diocese Liège, Belgium), rebuilt by Abbot Yvan de Bierbeck about 1226, and having three chapels in each arm of the transept, Belle Estoile² (Manche) and Étival³ (Vosges). The second church at Floreffe,⁴ begun as has been said in 1165, was planned somewhat differently from Prémontré and St. Martin, Laon; it had aisles both east and west of the transepts which projected three bays from the crossing. The outer pair of bays of the eastern aisle terminated eastwards in small apses in the thickness of the wall; the inner chapels on each side have been destroyed, but there is evidence of an early aisleless presbytery, but whether terminating with a square end or an apse is uncertain. It is unfortunate that at Licques (Pas-de-Calais), the mother house of Newhouse and through her of most of the other English houses, the existing buildings are of the eighteenth century nor are there any traces of earlier date.

In the Empire the order was powerful both in numbers and influence; its canons served the cathedrals of Brandenburg, Havelburg, Ratzeburg, and Lubeck. The early churches of the order display an extreme Cistercian simplicity and lack of ornament,⁵ but this may be due in part to the common use of brick in the northern provinces, and in plan and every other particular they are indistinguishable from the other churches of the particular province in which they are situated. Thus in Saxony they follow the Saxon type and in Rhineland the Rhenish, the great church at Knechtsteden⁶ having the traditional east and west apses of that province. The church at Jericho⁷ (diocese Havelburg, Altmark Magdeburg) is perhaps the best preserved church of the order in Germany.

In Spain the majority of houses were grouped in Old Castile and the order was but sparsely represented in Catalonia, a stronghold of the Cistercians, or in Portugal. The best preserved churches are at Aguilar del Campo (diocese Palencia), consecrated in 1212, St. Cruz de Rivas (diocese Palencia), late twelfth century, and Bell Puig de las Avellanas (diocese Lérida). They generally display the square-ended transeptal chapels, divided by solid walls, of the

¹ Plan in *Bull. des métiers d'arts* (Brussels, 1904), iv, p. 65, and R. Lemaire, *Les Origines du style gothique en Brabant*, i, p. 117.

² *L'Annuaire de l'Association Normande* (1911), p. 30.

³ Plan in G. Durand, *Églises Romanes des Vosges* (Paris, 1913), p. 218. The east end was rebuilt in the sixteenth century.

⁴ Plan in R. Maere, *op. cit.*

⁵ As at Jericho, Brandenburg, and Havelburg.

⁶ Plan in *Kunstdenkmäler d. Rhein. Provinz* iii, Kreis Neuss, p. 27 et seq.

⁷ Plan in Dehio und V. Bezold, *Kirchliche Baukunst des Abendlandes*, ii, cap. 2, taf. 51 and 57. Tüchelhausen, in Bavaria, subsequently transformed into a Charterhouse, has a twelfth-century aisleless church with a square east end, see plan in *Kunstdenkmäler Kön. Bayern, Unterfranken* iii, i, pp. 257 and 264. For plans of Brandenburg cathedral see K. Mayer, *Die Baukunst des Doms zu Brandenburg* (1910), p. 18, and Lubeck Cathedral, *Die Bau- und Kunstdenkmäler der Stadt Lübeck*, iii, i (1919), pp. 19 and 22.

Cistercian type, but the main building in each case terminated in an apse.¹

In the Levant the abbey of Bella Païs² or Episcopia (diocese Nicosia, Cyprus), founded by the royal house of Lusignan, is perhaps the most imposing monument of the order still surviving. The church has a square east end and an important narthex or galilee, but this latter is probably to be attributed more to Greek than to Cistercian influence. Of the two houses in the Holy Land, the abbey of Mount Joy near Jerusalem has a simple cross-church with an added aisle on the north and is said to have terminated in an apse, but of this there is now no evidence.

Later Premonstratensian churches in France ceased to be bound even by the slight Cistercian influence of the earlier buildings and the form of the east end shows as little uniformity as that of the contemporary churches of any other order. Dommartin³ (diocese Amiens, dep. Somme), consecrated in 1163, is the earliest displaying the ambulatory plan of the east end; the encircling apsidal chapels are contrived in the thickness of the wall and do not show externally. The church of Braisne St. Yved⁴ (diocese Soissons, dep. Aisne), dedicated in 1216, has an aisleless apsidal presbytery with two apsidal chapels, set diagonally on each side between it and the transept, an arrangement similar to that at Trier, Xanten, and other churches of the Rhine valley; it also possessed a very unusual west transept, now destroyed.⁵

The aisleless nave, so common in the English houses of the order, is comparatively rare on the continent. It occurred, however, at St. Just-en-Chaussée near Beauvais⁶ and at St. Cruz de Rivas in Spain, besides those already mentioned at Tüchelhausen and Mount Joy.

THE ORDER IN ENGLAND.

At the dissolution of the monasteries there were in England and Wales thirty-one independent houses of White or Premonstratensian canons and two houses of Premonstratensian nuns. Scotland had six houses, and Ireland six also. The English houses were in the early period of the order divided into

¹ Plans of all three houses in Lampérez y Romea, *Hist. de la Arquitectura Chris. Española*, ii, pp. 479, 483, and 484.

² Plan in C. Enlart, *L'art gothique . . . en Chypre*, and in *Trans. R. I. B. A.* 1882-3.

³ Plan in C. Enlart, *Monuments religieux de l'architecture romane et de la transition dans la région picarde* (1895). The plan is exactly paralleled in the Cistercian church of Heisterbach, near Bonn.

⁴ Plan in *Congrès Archéologique de France* (Rheims, 1912), lxxviii, p. 428.

⁵ See view, before restoration, in *Bull. Monumental*, liii, p. 374.

⁶ Plan in Pihan, *Hist. de S. Just-en-Chaussée* (1885), p. 159.

three circaries, (a) North England and Scotland with thirteen houses,¹ (b) Middle England with thirteen,² and (c) South England with eleven.³ Of the English houses Bradsole and Bayham were colonized directly from Prémontré and Talley from St. Jean at Amiens; the remainder all owed their origin either directly or by descent from the abbey of Newhouse in Lincolnshire, a daughter of Licques (Pas-de-Calais), itself a daughter of St. Martin, Laon—one of the 'elder daughters' of Prémontré. To judge from the actual remains the most flourishing architectural period in this country was the thirteenth century, but there is evidence of considerable activity, chiefly in the direction of tower building, in the fourteenth century, and the visitations of Bishop Redman indicate extensive building works in several houses such as Newbo and Croxton, late in the fifteenth century. It is unfortunate that many of the houses of early date have either no extant remains or have been removed, like Bayham, Coverham, and Leiston, from their original sites. The two most important houses of the order Newhouse and Welbeck, the one the earliest and the other the richest of the English abbeys, provide little or no evidence of any kind. At Alnwick and Easby, however, much of the plan of the first church has been preserved and something also can be learned of the late twelfth-century buildings of Torre, Croxton, Egglestone, Bayham, and perhaps West Langdon. The first few years of the following century provide the plans of Talley and Cockersand, and Titchfield and Shap are of only little later date. From the comparative plans of most of these churches together with some continental examples (pl. xx) drawn to a uniform scale it will be seen how very closely the type approximates to that of the Cistercians. All had the square-ended aisleless presbytery and most of the early houses had the solid walls dividing the transeptal chapels,⁴ which gave way, as in the sister order, in the thirteenth century to open arches with screens between the chapels. The plans show the various churches as originally planned and without subsequent enlargements,⁵ and the portions shown in solid black are those still remaining and indicate the bases of the

¹ Alnwick, Blanchland, Cockersand, Coverham, Egglestone, Easby, and Shap; and in Scotland, Dryburgh, Ferne, Holywood, Tongland, Soulseat, and Whithorn.

² Barlings, Beauchief, Croxton, Dale, Hagnaby, Hales Owen, Lavendon, Newbo, Newhouse, Sulby, Talley, Topholme, and Welbeck. The list of houses in the Circary of Middle England is given in documents of 1311 and 1470, printed in *Collectanea Anglo-Premonstratensia*, i, pp. 64 and 76, and hence by elimination the lists of the N. and S. Circaries are obtained.

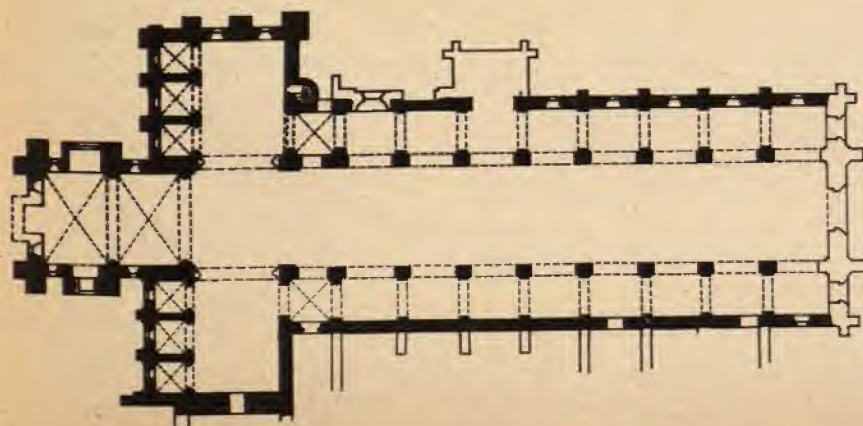
³ Bayham, Beeleigh, St. Radegund, Dereham, Dureford, Langdon, Langley, Leiston, Torre, Titchfield, and Wendling.

⁴ These may also have existed at Easby before the rebuilding of the arcades.

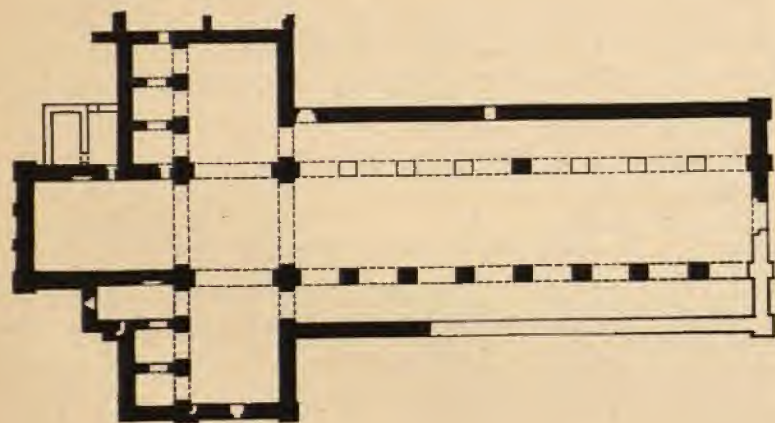
⁵ At Langdon one of the solid walls between the chapels in the N. transept was uncovered in the excavations of 1882 but its significance escaped attention. The extent of the original E. arm is indeterminate. At Torre the extreme length of the E. respond of the nave arcade and the presence of a plinth to the aisle wall indicate that this aisle was an addition.

COMPARATIVE PLANS OF
PREMONSTRATENSIAN CHURCHES
(AS ORIGINALLY PLANNED)

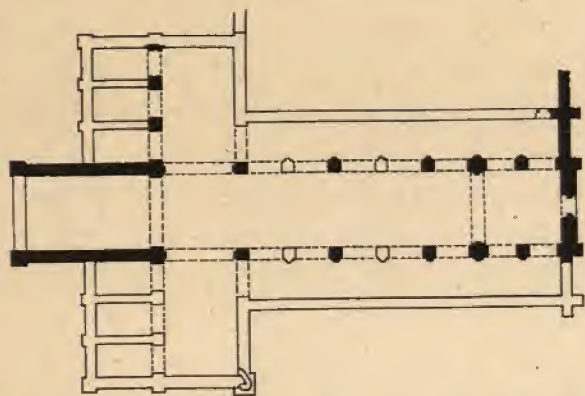
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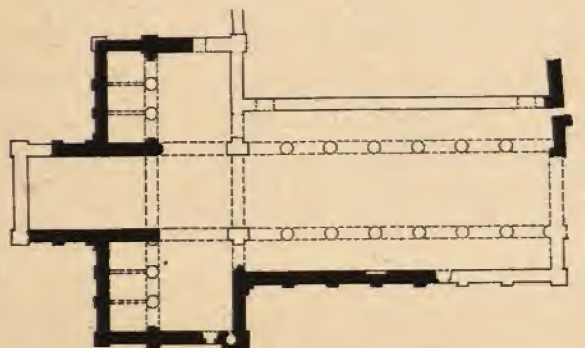
LAON ST MARTIN



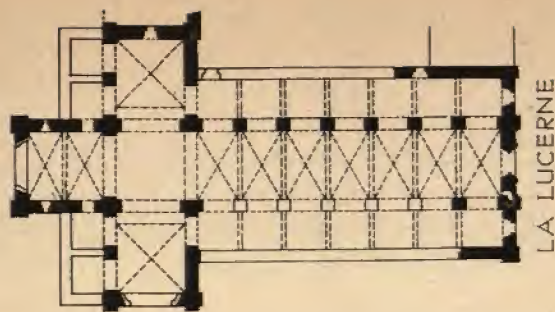
TALLEY



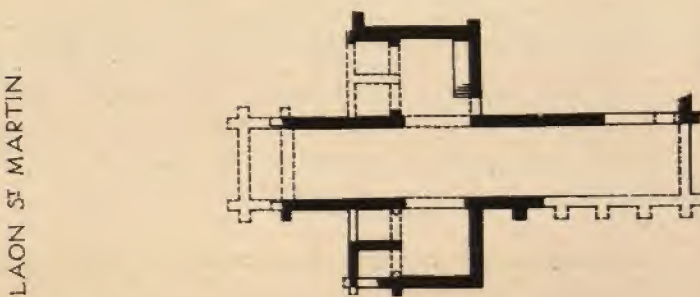
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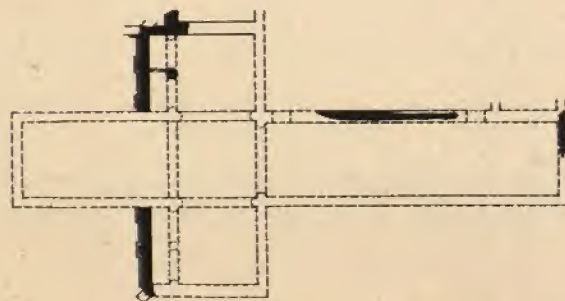
EASBY



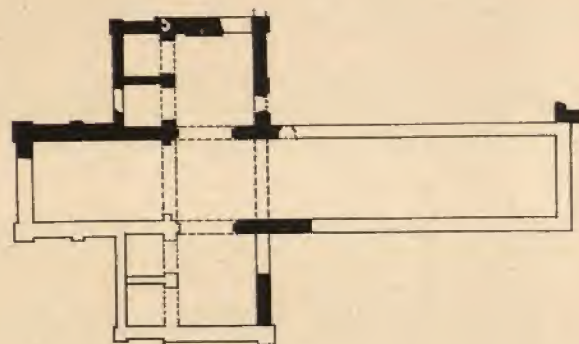
LA LUCERNE



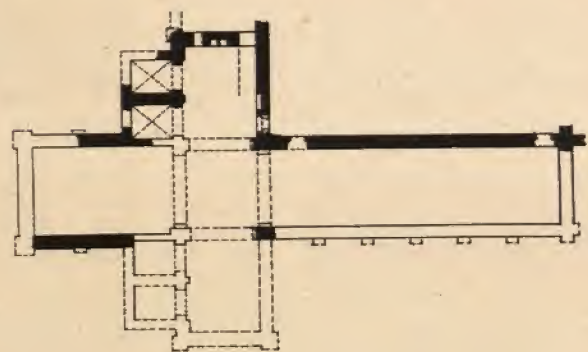
WEST LANGDON



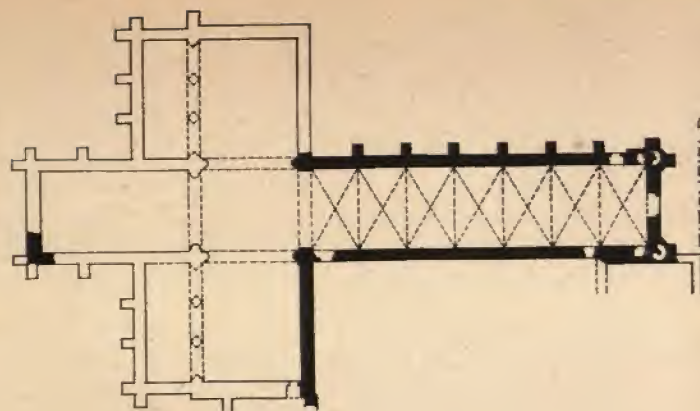
COCKERSAND



TORRE



BAYHAM



TITCHFIELD

reconstruction. The main distinction between the churches of the two orders is the greater prevalence of the aisleless nave which the Cistercians¹ early abandoned owing to their use of the body of the nave as the quire of the *Conversi* and the consequent difficulty of communication; this factor did not operate among the Premonstratensians who had no quire for the *Conversi*, and consequently the aisleless nave was often retained until the dissolution. The single aisle which occurs in several White Canons' churches on the side opposite the cloister was nearly always an afterthought; there is definite evidence of this at Langdon, Torre, Dale and Croxton and the building at Shap progressed so slowly that the plan may well have been altered in the course of operations. In the smaller houses of the order there is some evidence that the transept was dispensed with; thus the early church at Blanchland probably lacked this feature, and the twelfth-century church at Postel,² Belgium, was without transepts till the last century. In their later church planning the White Canons show as little uniformity in this country as in France. The thirteenth-century churches of Hales Owen, Bradsole, Langley and Dryburgh, the thirteenth- and fourteenth-century church at Coverham and the late fourteenth-century church at Leiston are all symmetrically planned and each presents a different type of arrangement of the eastern arm; with the exception of Coverham, however, the presbytery always projects beyond its flanking aisles or chapels. The church at Langley had also a symmetrically planned east end with an added chapel on the north, but here the remains are insufficient to afford definite evidence of date. In other cases, such as Dale and Croxton, the gradual accretion or rebuilding of parts has resulted in an extreme irregularity in the eventual plan, but there is no evidence even in these instances that the original form of the church was unsymmetrical.

One characteristic of the Benedictine and Augustinian church is commonly absent; the cult of the Virgin is not reflected, to any degree, in Premonstratensian planning. Lady chapels, where they are identifiable, do not exceed in size or importance the chapels with other dedications.³ It is true that the majority of White Canons' abbeys were dedicated to the Virgin, but this was by no means a rule as in the Cistercian order, and unusual dedications to French saints are found in St. Radegund at Bradsole and St. Martial at Newhouse.

One other important point remains to be noticed, the absence in many

¹ Aisleless Cistercian naves occurred at Waverley and Tintern in England, Gray in Ireland, Lyse in Norway, etc.

² M. E.-L. Gife, 'Postel, son abbaye et son église', in *Annales Acad. d'Archéologie de Belgique*, xxviii (1872), p. 133; the modern transepts are not differentiated on the plan.

³ What appears to be a Lady chapel of the normal type has, however, recently been excavated on the north side of the presbytery at Cockersand. It measured 36 ft. by 17 ft.

early churches of the order, except in Germany, of the masonry tower. Most of the later towers show evidence of being additions to the original building. Thus in France there were west towers at Prémontré and Dommartin; in Belgium Floreffe had a sixteenth-century tower built over the south transept; at Tongerlo,¹ Averbode,² and St. Michael, Antwerp,³ the tower was added to the east of the north transept, at Bella Païs there is a stone bell-cote only, over the west end of the nave, while Postel remained without a tower until the eighteenth century. In England the common absence of this feature in the early churches is evidenced by the numerous cases in which a bell-tower has been subsequently added. The earliest of these appears to be the thirteenth-century tower added at the end of the north transept at Blanchland; in the following century towers were added at the west end of the naves of Langley, Beauchief, and possibly at Torre and on the north side of the nave at St. Radegund.⁴ A new tower, over the crossing, was built at Barlings⁵ during the same period, and in the fifteenth century a west tower was added at Shap. In addition to these there are possible indications of a west tower at Newhouse and the suppression inventory⁶ perhaps indicates the existence of one at Leiston. On the other hand, the existing remains or foundations show that a tower over the crossing was built or contemplated, from the first, at Talley, Dale, and Alnwick.

DOMESTIC BUILDINGS.

To turn now to the planning of the domestic buildings, it will be found that they follow very closely the arrangements of the Austin Canons, the only peculiarly Cistercian feature being the form of the chapter-house.

¹ See an engraving in A. Sanderus, *Le grand théâtre sacré du duché de Brabant*, ii, p. 101. The engraving of Parc Abbey in the same work shows no masonry tower.

² See a late eighteenth-century engraving reproduced in J. E. Jansen, *op. cit.*, i, p. 122.

³ See an engraving of 1737 reproduced in J. E. Jansen, *op. cit.*, i, p. 188, and A. G. B. Schayes, *Pointed Architecture in Belgium*, pt. iii, p. 18. A sketch-plan of the church is reproduced in J. de Wit, *De Kerken van Antwerpen*.

⁴ As it has been stated (*Arch. Cant.* xiv) that this tower is of one build with the adjoining church, the following conclusive evidence is given in support of the above statement:—(a) there is a straight joint between the north and west walls of the tower and the adjoining transept and nave; (b) there is a thirteenth-century external window in the west wall of the transept and now opening into the dark east annexe of the tower; (c) the south wall of the tower shows evident marks of thickening against the pre-existing nave, and (d) the details of the two doorways are of the fourteenth century, except for an obviously reused label over the south doorway.

⁵ See engraving in Dugdale, *Mon. Ang.* (1830), vi, p. 915. Only the north-west pier of this tower is still standing.

⁶ See *post*, p. 140. The inventory deals with the tower after the church and mentions living-rooms in it, a fact hardly compatible with a position over the crossing but paralleled in the west tower at Langley.

The CLOISTER in twenty-four out of the twenty-six examples in this country of which particulars are available lay on the south side of the church, the only exceptions being at Egglestone and Croxton. The cloister at Croxton also provides one of the very rare instances in this country of the lavatory projecting into the cloister; this lavatory is rectangular, unlike the majority of other examples, which were either polygonal or round.¹ A round lavatory still exists in Norbert's abbey at Magdeburg,² and there was one of rectangular form projecting from the east side of the cloister at Ardenne (Calvados). Elsewhere the lavatory commonly occupies the normal position next the frater door, or, as at Langley, Blanchland, La Lucerne, and Beauport, is contrived in the adjoining west wall of the cloister.

The CHAPTER-HOUSE, in the great majority of cases, was divided by a row or rows of columns into two or three aisles, the two-aisled plan being the more prevalent. At Prémontré the thirteenth-century chapter-house³ was standing down to the middle of the last century and was a square apartment (16.60 m.) divided into three aisles by four columns. It is asserted⁴ that a second chapter-house was built, for the chapters-general, also of three aisles and of the same width but with the excessive length of fifty metres, and it is possible, therefore, that the building standing in the nineteenth century was only a vestibule. Other chapter-houses of this type existed at La Lucerne and Beauport (two aisles) and Aguilar del Campo, St. Cruz de Rivas, Bell Puig, and Antwerp (three aisles). At Magdeburg a building now called the 'hochsäulige Kapelle', of the same form, was probably the original chapter-house. In England the type occurred at St. Radegund, Langdon, Beeleigh,⁵ Leiston, Shap, and Dale (two aisles), and Bayham, Langley, and Titchfield (three aisles). The chapter-house at Cockersand is a thirteenth-century octagon with a central pillar, and that at Alnwick was round, but this type is apparently unrepresented on the continent.

It is perhaps worthy of note that at Titchfield the majority of the abbots of the house (twelve in all) were buried in the cloister⁶ and not in the chapter-

¹ e.g. Durham, Wenlock, Lewes, Exeter St. Nicholas, and Christchurch Canterbury (twelfth-century plan) in England, Melrose in Scotland, and Mellifont and Dunbrody in Ireland.

² M. Modde, *op. cit.*, plan, etc. Twelfth-century cloisters survive at Magdeburg and Hamborn (Rhein-Provinz), and a good late twelfth-century example at Basse-Fontaine (Aube), see A.-F. Arnaud, *Voyage archéologique et pittoresque dans le Département de l'Aube* (1837), p. 63.

³ E. Fleury, *Antiquités du département de l'Aisne* (1877-82), ii, pp. 178-9.

⁴ M. Daras, 'Description des salles capitulaires de Prémontré', in *Bull. Soc. Arch. de Soissons* (1856), 1st ser. x, p. 64.

⁵ This is the only example in this country still standing intact, except the plain rectangular structure at Dryburgh.

⁶ See list in *Hants Field Club*, iii, p. 325.

house or church. Whether this was an isolated practice or obtained elsewhere in the order is difficult to say, but it is perhaps significant that amongst a number of memorials found in the chapter-house at Dale,¹ no abbot is included, while at Alnwick there is a record² of the burial of the founder's son in the cloister outside the chapter-house.

The position of the WARMING-HOUSE, in the sub-vault of the dormer, can be identified by the presence of the fireplace in this apartment at Leiston, Croxton, Beeleigh, Easby, Shap, Alnwick, Dale, and Dryburgh, and it is reasonable to suppose that this was the normal arrangement. The thirteenth-century warming-house at Beeleigh remains intact.

The DORMER, in this country, always formed the first floor of the range east of the cloister, except at Easby and Croxton, where it occupied the corresponding position on the west side. The dormer was divided in later times into separate cubicles by partitions of wainscot; this alteration is recorded to have taken place at Floreffe³ under Abbot Gauthier (1336-42). Bishop Redman, in his visitations, mentions the existence of these cells at Langley,⁴ and directs that the doors of the cubicles at Leiston⁵ should each be provided with a small window, presumably in order that the Circator might exercise due supervision. The great early fourteenth-century dormer at Bella Pâis,⁶ built by Hugh IV of Cyprus, was apparently designed so that each canon should occupy a whole bay on one side or other of the building, each division being provided with a small window in the outer wall with a stone locker beside it. The dormer at Beeleigh remains intact but there are now no traces of the cubicles; at Dryburgh the walls of the dormer stand to their full height but the building is roofless.

The FRATER always occupied the opposite side of the cloister court to the church, and was commonly built on an undercroft as at Easby, Alnwick, Shap, Croxton, Dureford (?), Hales Owen, Torre, St. Radegund, Dale, Bayham, and Dryburgh. At Beeleigh the frater appears to have been on the ground floor, and this was probably also the case at Langley. A good example of a frater-pulpit remains at Topholm, and there is a less complete example at Easby.

Of the WESTERN RANGE little need be said; at Alnwick it was entirely absent, the cellarer's department being housed in a separate building. The upper story of the western range appears, as in other orders, to have often formed the guest-house.

There is evidence in the early statutes of the provision of both inner and outer parlours, the inner for conversation between the inmates, called the *locu-*

¹ *Derbyshire Arch. and N. H. Soc. Journ.* i, p. 109.

² *Arch. Journ.* xlv, p. 340.

³ R. Maere, *op. cit.*

⁴ *Coll. Anglo-Premont.* iii, 16.

⁵ *Ibid.* iii, 54.

⁶ C. Enlart, *L'art gothique . . . en Chypre*, with illustration.

torium, and the outer for conversation between the canons and the laity, called the *auditorium*.¹ The distinction seems to have been lost subsequently and the only reference² to the latter term that I have encountered in connexion with this country leaves no doubt that the inner or conventual parlour is referred to.

Five Premonstratensian INFIRMARIES³ have, so far, been excavated in this country, all but one being in the normal position east or south-east of the claustral block. They each include a hall of some size, but there is no architectural evidence of the existence of a chapel. In no instance does the hall follow the aisled plan of the older orders. The infirmary at Easby is unique in this country in being placed on the opposite side of the church from the cloister. The infirmary at Alnwick is represented by a maze of foundations, which it is next to impossible to unravel.

TOPOGRAPHICAL LIST OF HOUSES IN ENGLAND.

A. Canons.

ALNICK (Northumberland) (fig. 1). The site of the abbey was excavated in 1884 and the lines of the walls are laid out on the surface. The only part standing above ground is the gatehouse. See Sir W. H. St. J. Hope, *Arch. Jour.* xlv, p. 337.

BARLINGS (Lincs.). The only surviving part of the building is the fourteenth-century north-west pier of the central tower with the adjoining portions of the transept and north aisle of the nave; both nave and aisle were vaulted in stone. The cloister, etc., apparently lay to the south of the church and excavation would probably recover the complete plan.

BAYHAM (Sussex) (fig. 2). The extensive remains of this house include the church, extended in the thirteenth century, parts of the claustral buildings, and the gatehouse. See R. W. Paul in the *Builder*, 3rd July 1897.

BEAUCHIEF (Derby). The remains consist only of the fourteenth-century west tower and part of the nave of the church, the latter much altered and mostly rebuilt. Two re-erected doorways flank the tower on the north and south. Rather more of the nave is shown standing in Buck's view.

BEELEIGH (Essex) (fig. 3) retains the range east of the cloister, converted into a house. It includes the thirteenth-century chapter-house and warming-house with the dorter above. See Fowler and Clapham, *Beeleigh Abbey*.

¹ J. E. Jansen, *op. cit.*, i, p. 196.

² At Dale; see *Derbyshire Arch. and N. H. Soc. Journ.* v, p. 12.

³ Alnwick, Easby, W. Langdon, St. Radegund, and Shap. Small remains of other infirmaries have been found at Langley and Croxton.

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BLANCHLAND (Northumberland) (fig. 4). The thirteenth-century presbytery, north transept, and tower were restored for use as a church in 1752. The south wall of the nave and part of the western range and gatehouse are still standing. See W. H. Knowles in *Arch. Jour.* vol. lix, p. 328.

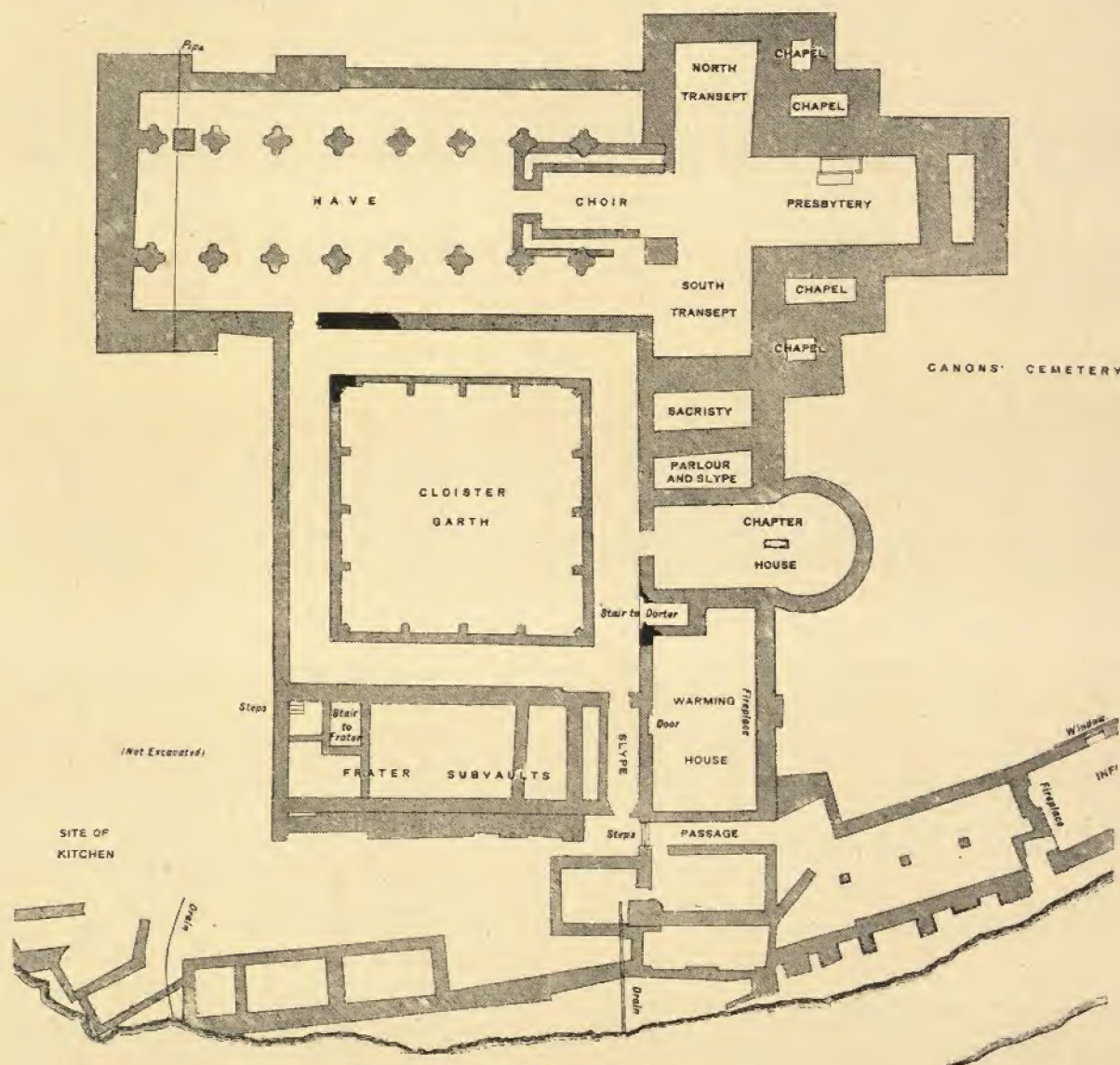


Fig. 1. Alnwick Abbey, Northumberland.
Reproduced, by permission, from *Archaeological Journal*, xlv.

COCKERSAND (Lancs.) (pl. xx). The thirteenth-century octagonal chapter-house is still standing, and there are remains of the transept of the rather earlier church and of some other buildings to the south-west and south-east. See *Archit. Review*, vol. xxix, p. 322. The site has recently (1923) been excavated, and Mr. J. Swarbrick has kindly supplied me with the following particulars:—

The church proved to have been about 170 ft. long by nearly 80 ft. across the transepts, with an added chapel 36 ft. by 17 ft. east of the N. arm. The cloister was 72 ft. by 66 ft. with the frater on the south, raised on an undercroft and approached by a stair at the south-west angle of the cloister. The ground floor of the eastern range was occupied by the warming-house. Remains of the infirmary were also found.

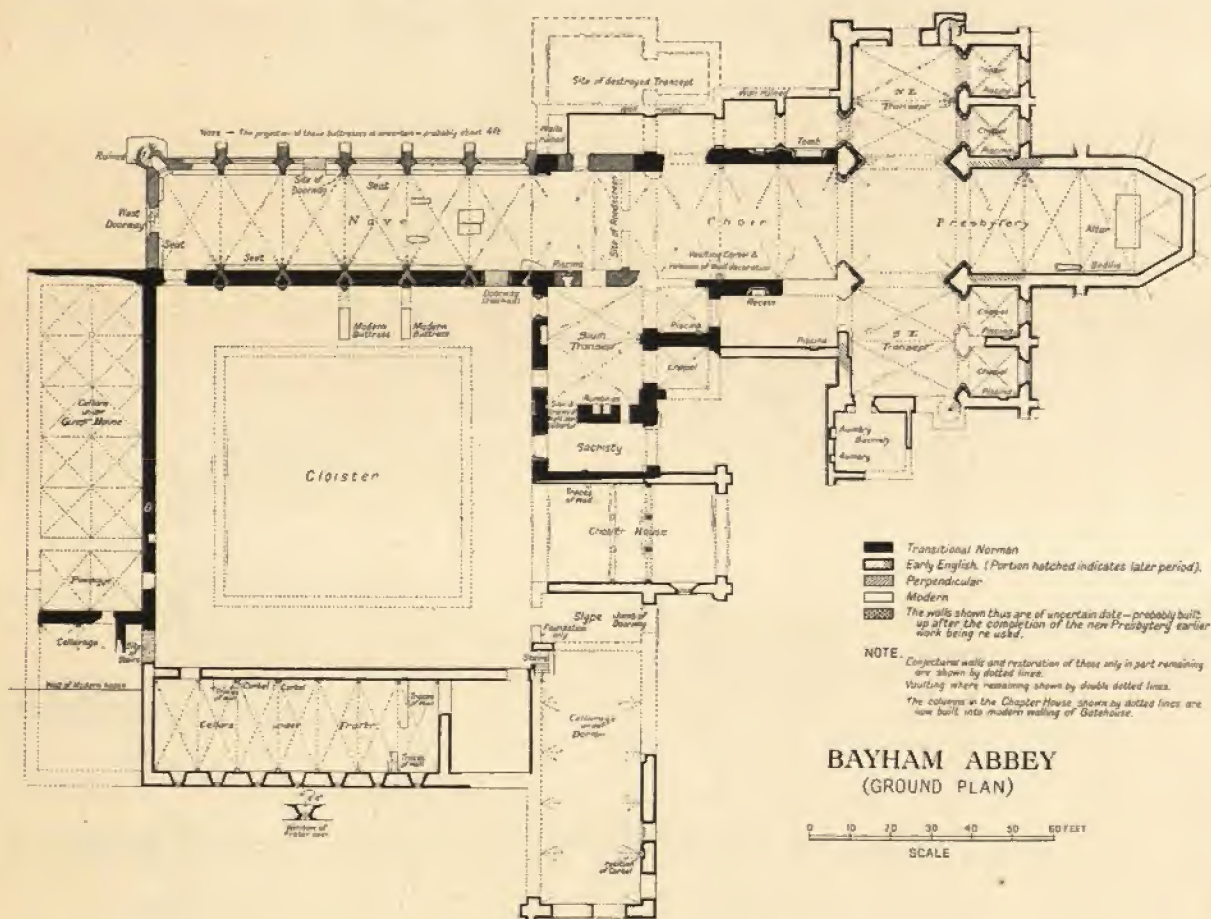
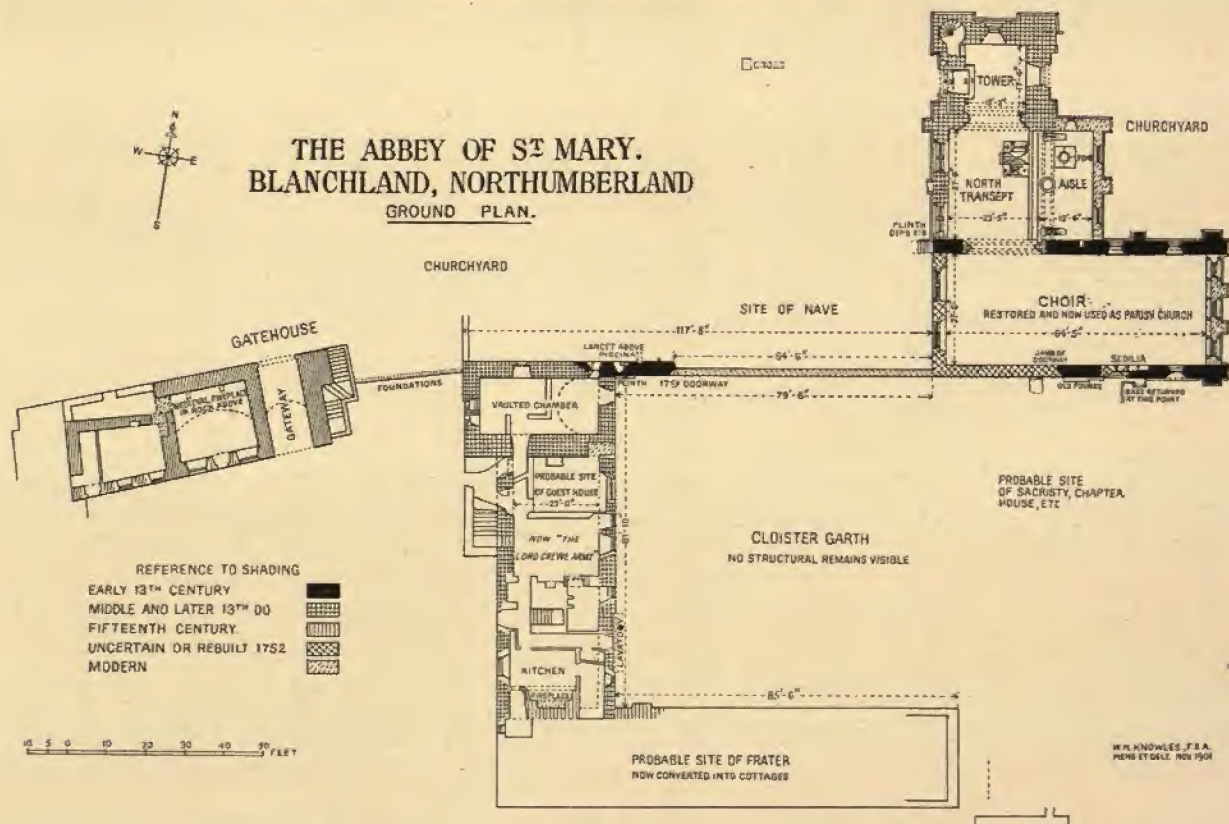
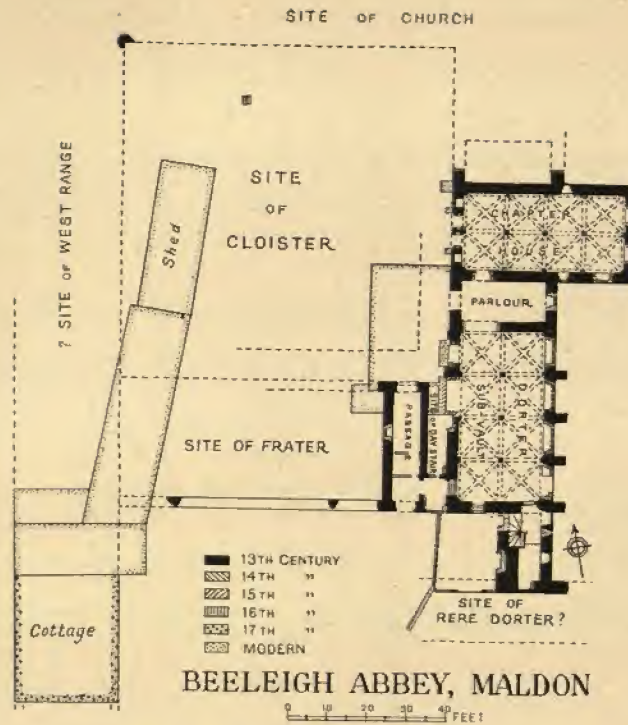


Fig. 2. Bayham Abbey, Sussex.
Reproduced, by permission, from the Builder, 1897.

COVERHAM (Yorks.) (fig. 5). The remains of the church include parts of the thirteenth-century east end and north transept and two bays of the fourteenth-century south arcade of the nave. Part of the west range is used as a house, and there are ruins of the gatehouse. See *V.C.H. Yorks., N. Riding*, i, p. 217.

CROXTON (Leicestershire) has recently been excavated by our Fellow Lord Granby, who has allowed me access to his plans and photographs; these will



be published when the excavations are complete. Croxton¹ was founded about 1150, and the first buildings are said to have been completed in 1162. In 1326 the church, cloister, and other buildings were destroyed by fire. In Bishop Redman's visitation² of 1500 it is mentioned that the abbot had built and repaired the church and the Lady chapel. Previous to the excavations none of the abbey buildings was standing aboveground, but a fairly complete ground-plan has been recovered, and, though the story is somewhat complicated by the conversion of the frater into a house after the dissolution, the main lines of the development of the build-

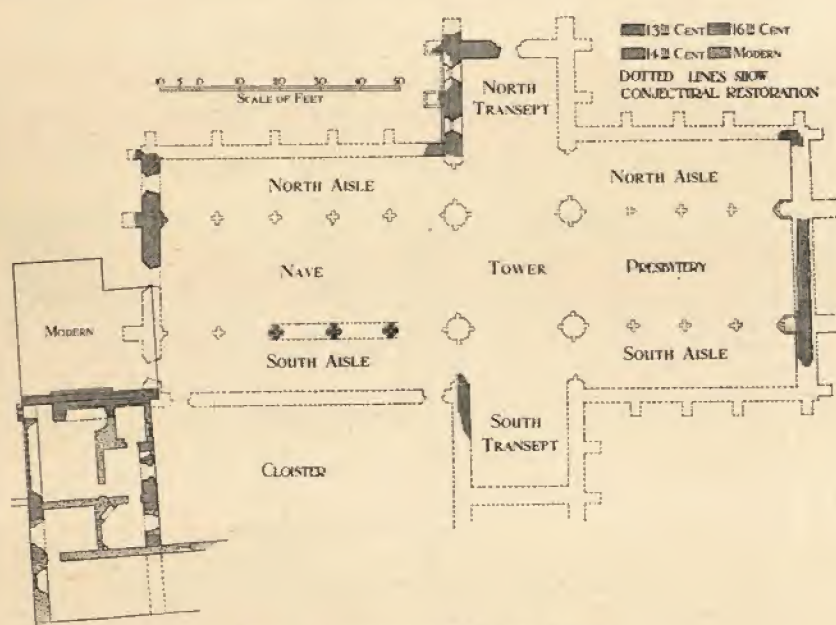


Fig. 5. Coverham Abbey, Yorkshire.

Reproduced, by permission, from *V.C.H. Yorks., North Riding*, i.

ing are recoverable. The early church had apparently an aisleless nave of which the foundations of the south wall appear under the later arcade; the line of the transepts is indicated by the surviving portion of the early dorter which crosses the east end of the frater. The original north-east buttress of the presbytery apparently also survives incorporated in the walls of the later extension. Probably in the thirteenth century the buildings were much enlarged, the cloister being extended over the site of the early east range and north transept, a new transept built farther east, the presbytery extended, and the south aisle added. This alteration of the cloister also necessitated the building of a new dorter on the west of the cloister. Repairs after the fire of 1326 probably account for the rebuilding of the western part of the nave arcade in two bays

¹ The historical particulars are taken from Nichols' *History of Leicestershire*, i, pt. 1, p. 151 *et seq.*

² *Coll. Ang. Premon.* ii, 163.

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instead of three, and the reconstruction of the piers of the east arcade of the north transept. Late in the fifteenth century the east end of the presbytery was rebuilt and perhaps again extended, the south chapel (probably the Lady chapel) rebuilt and the curious chapel south of the nave added; the rebuilding probably then extended to the south aisle and had reached to the last bay but

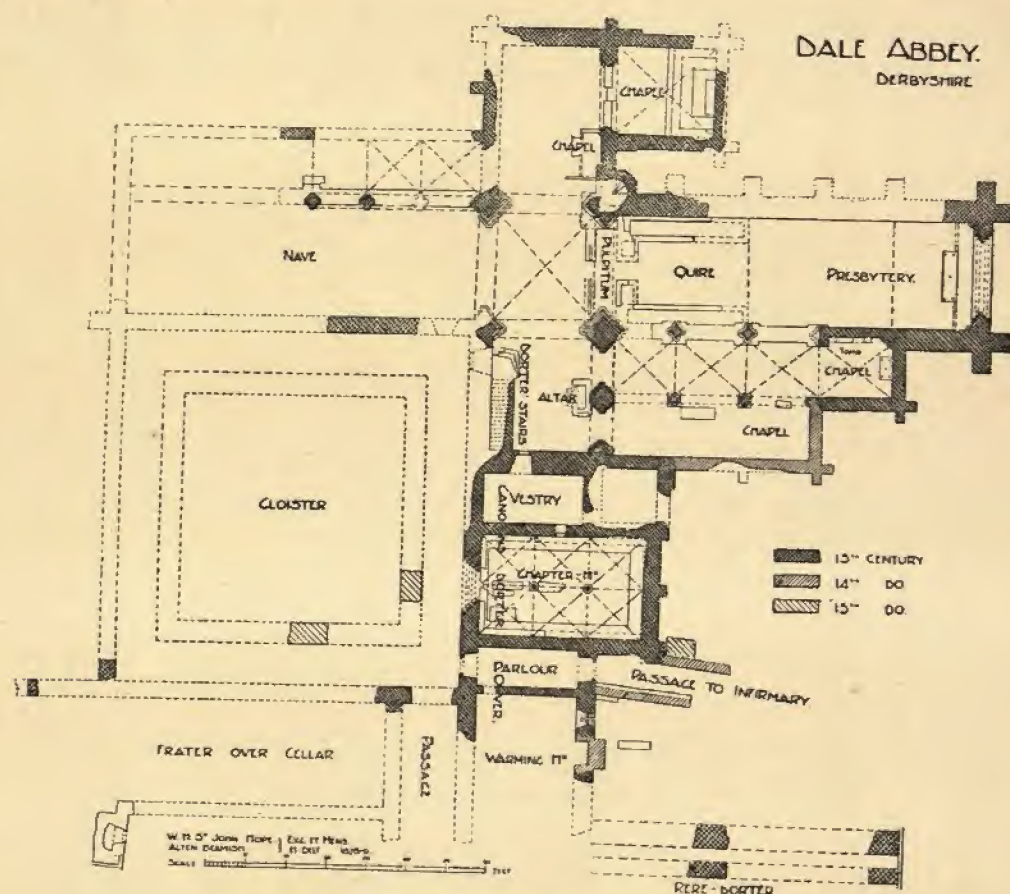


Fig. 6. Dale Abbey, Derbyshire.

Reproduced by permission of the Royal Archaeological Institute.

one from the west when operations were interrupted by the Dissolution, leaving the work in the unfinished state revealed by the excavations. The total internal length of the church, in its final form, was $209\frac{1}{2}$ ft. A MS. of 1443-4 preserved at Belvoir¹ gives the dedications of the various altars as St. Mary, St. John, St. Katherine, Holy Cross, Trinity, and the Great Altar. With regard to the domestic buildings little need be said: the unusual form of the lavatory has already been touched upon and the other buildings present no unusual features.

¹ Belvoir MSS. K.B.

The fragmentary foundations north of the early east range probably represent the early rere-dorter, which was no doubt pulled down in the thirteenth-century alterations. A large block to the north of the main buildings is probably only in part medieval, and the piers and responds in the north-eastern part are re-used material.

DALE (Derby) (fig. 6). The only remains visible before the excavations of 1878 were the east end of the presbytery with the east window. It may be noted that the foundation under the north arcade of the nave and not central with it implies an aisleless nave to the first church. See Sir W. H. St. J. Hope in *Derb. Arch. and N. H. Soc. Jour.* i, p. 100, and ii, p. 128.

DEREHAM, WEST (Norfolk). The position of the church and cloister is not now traceable, the only old buildings standing on the site being the remains of a large stone barn about 122 ft. long and the east wall of a farm-house with four windows of about 1500; this may have formed part of the abbot's lodging.

DUREFORD (Sussex). The site is occupied by modern farm-buildings surrounding a yard probably representing the cloister; the building on the south retains part of its medieval south wall, and the discovery some time ago of a column to the west of the same building seems to indicate that here was the undercroft of the frater. A good coffin-lid and some heraldic and other tiles remain on the site.

EASBY (Yorks.) (fig. 7). The important remains of this abbey were fully excavated in 1886 and described by Sir W. H. St. J. Hope in the *Yorks. Arch. Jour.* x, p. 117. See also *V.C.H. Yorks., N. Riding*, i, p. 56.

EGGLESTONE (Yorks.) (fig. 8). Most of the shell of the church remains standing with parts of the ranges east and north of the cloister. The late twelfth-century church was much enlarged in the thirteenth and fourteenth centuries. See *V.C.H. Yorks., N. Riding*, i, p. 110.

HAGNABY (Lincs.). A desolate moated site near the coast 10½ miles E.S.E. of Louth. There are extensive foundation mounds, but they are of very indefinite form and have probably been dug through for building material. No structural fragment appears above ground.

HALES OWEN (Worcestershire) (fig. 9). The remains consist of fragments of the thirteenth-century church and frater and a long two-storeyed building to the south-east. See *Birm. and Mid. Inst.* ii, p. 49, and *V.C.H. Worcestershire*, iii, p. 137.

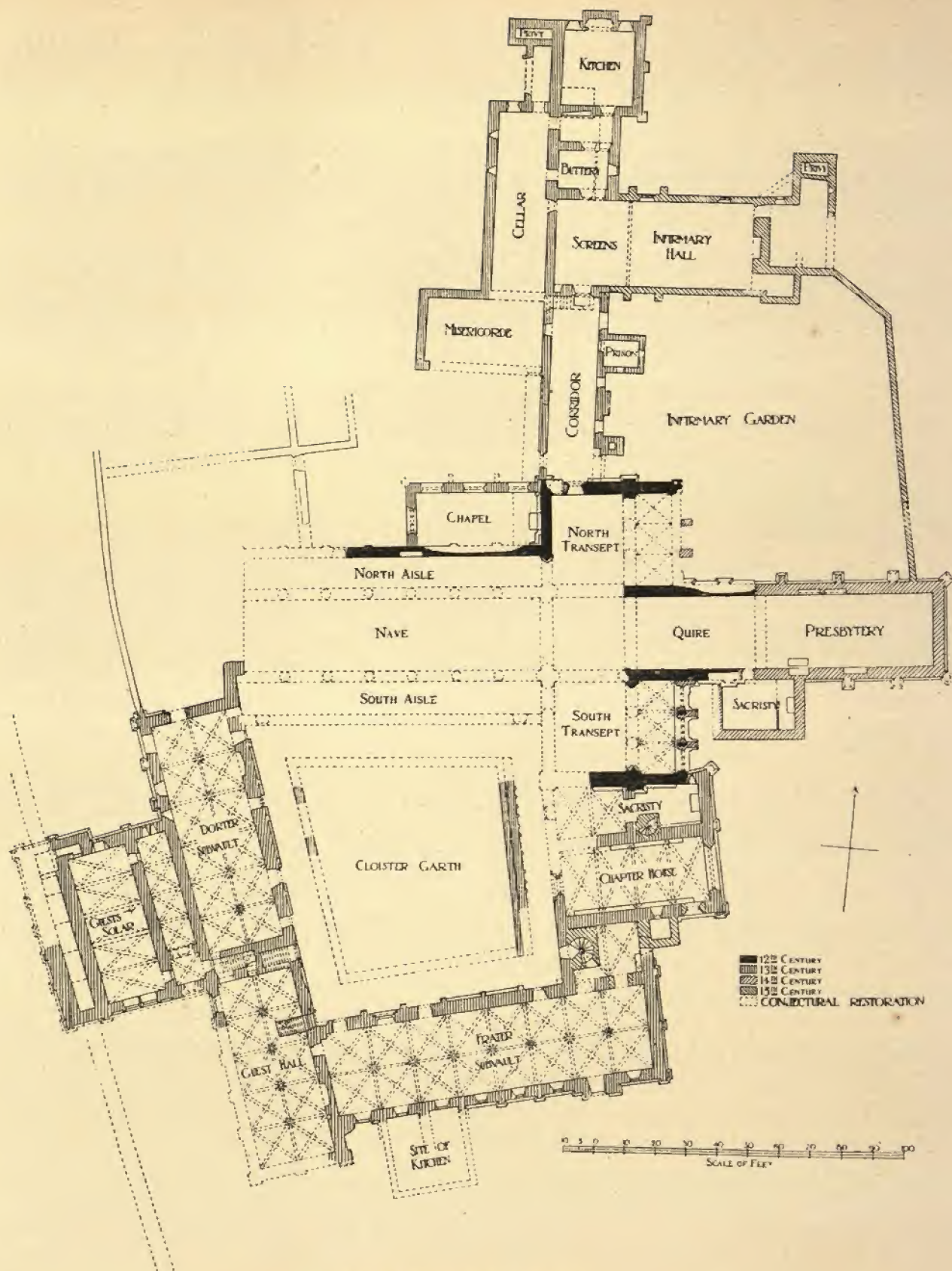
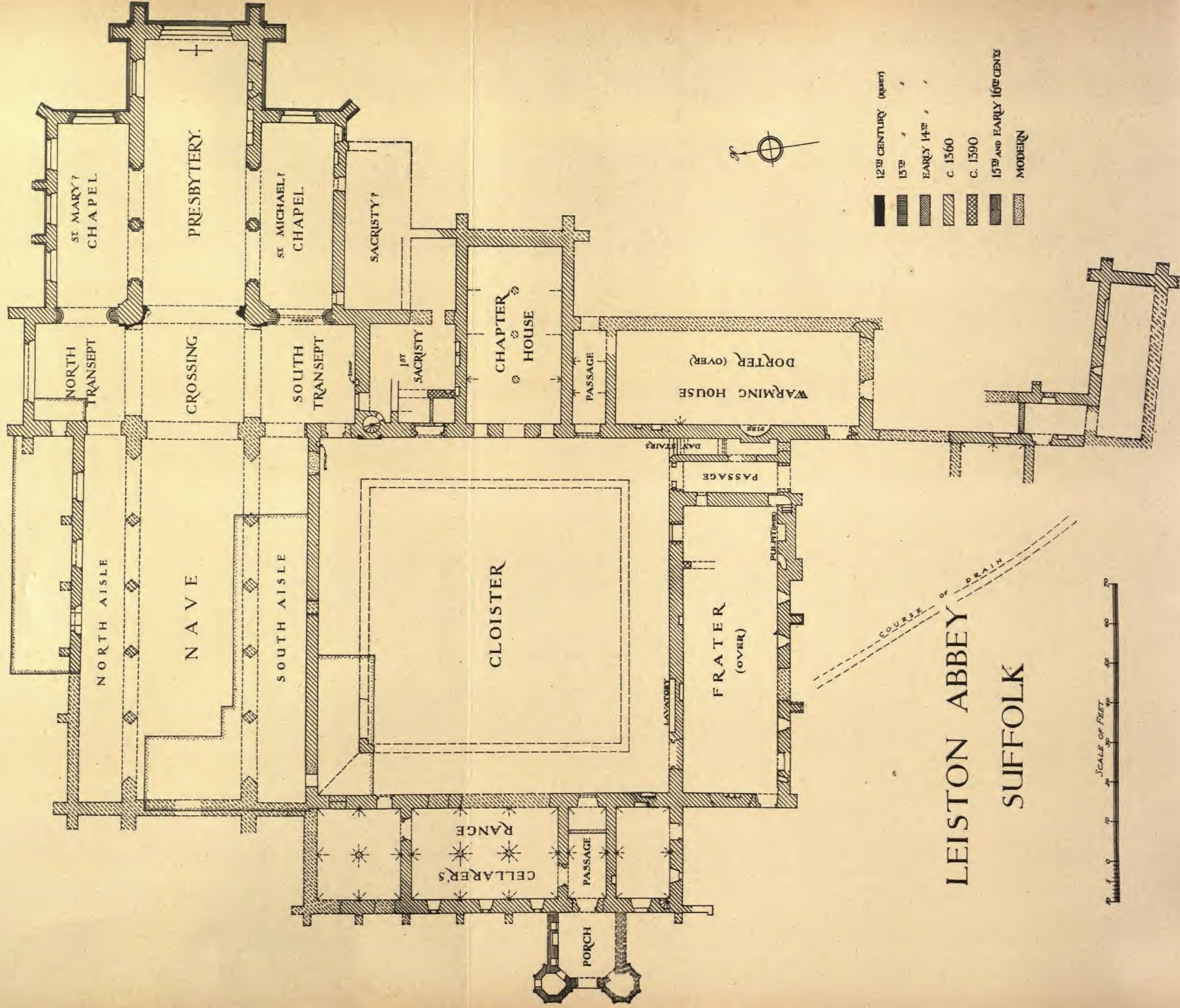


Fig. 7. Easby Abbey, Yorkshire.
 Reproduced, by permission, from *V.C.H. Yorks., North Riding*, i.



LEISTON ABBEY SUFFOLK

SCALE OF FEET
0 10 20 30 40 50 60 70

LANGDON (Kent) (fig. 10). The existing farm-house incorporates portions of the walls of the western range, but the rest of the plan was recovered by excavation in 1882. See Sir W. H. St. J. Hope in *Arch. Cant.* xv, p. 59.

LANGLEY (Norfolk) (fig. 11). The remains still standing include most of the

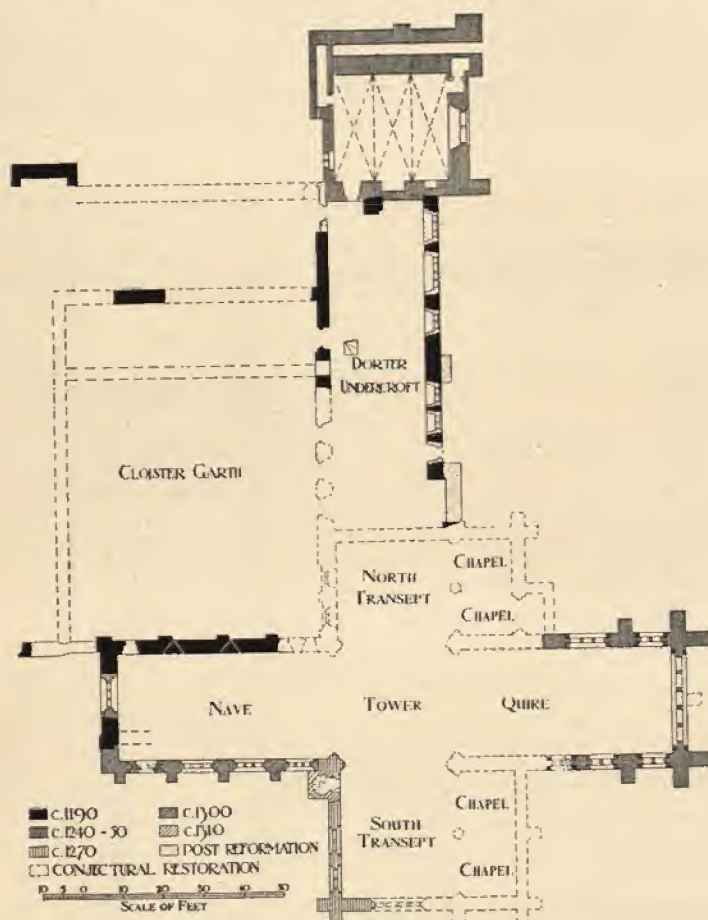


Fig. 8. Egglestone Abbey, Yorkshire.

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western range with the adjoining gatehouse range, part of the early thirteenth-century chapter-house and other fragments. The rest of the buildings shown on the plan were excavated in 1921. See F. C. Elliston Erwood in *B.A.A. Jour.* 1922, p. 49.

LAVENDON (Bucks.). There are no remains of buildings above ground, but a moat and some foundation-mounds mark the site.

LEISTON (Suffolk) (pl. xx1). The important remains of Leiston abbey have not hitherto been described and the only previously published plan is the entirely

HALESOWEN ABBEY.

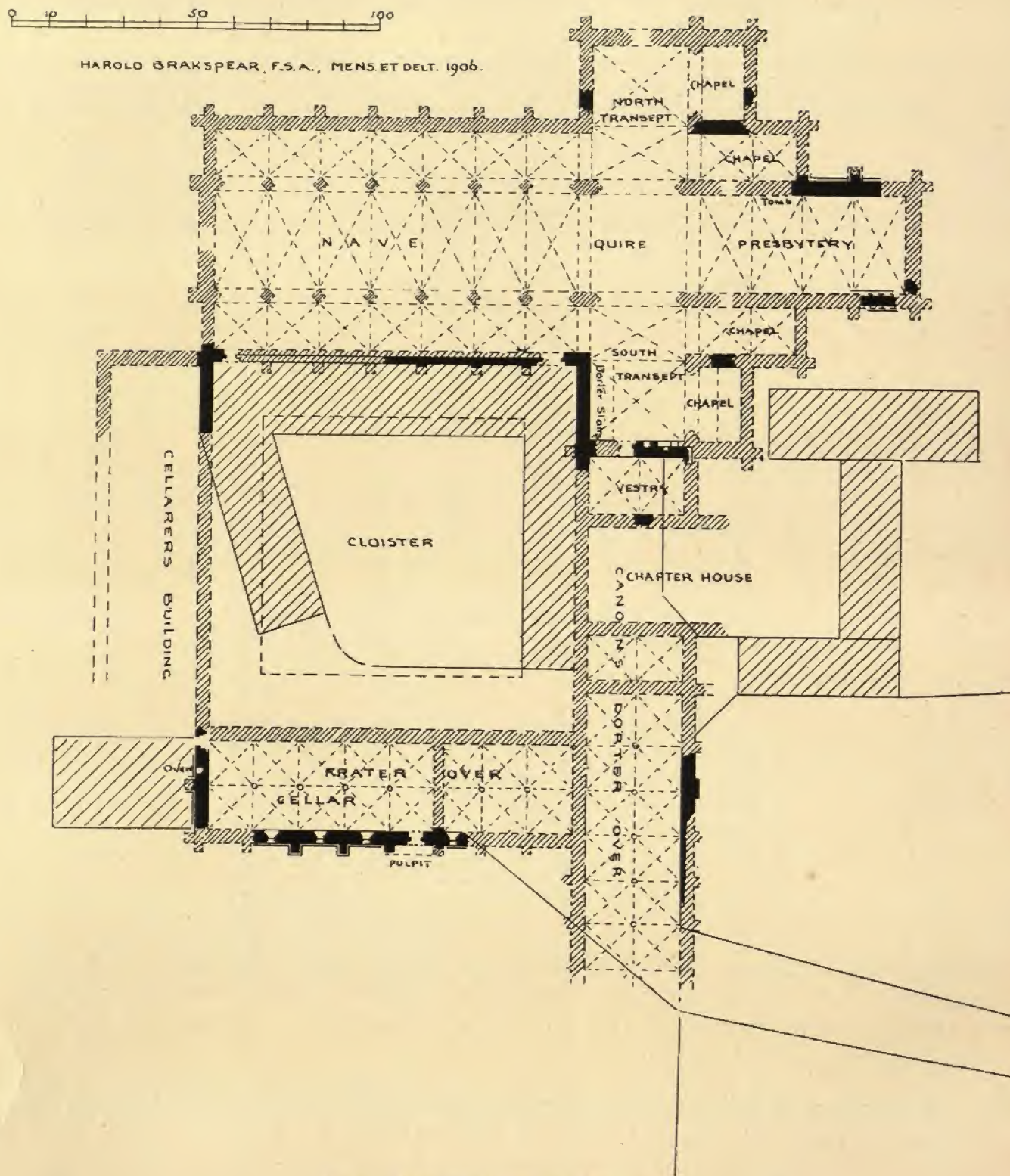


Fig. 9. Halesowen Abbey, Worcestershire.
Reproduced, by permission, from Archaeological Journal, lxxiii.

inadequate one in Suckling's *History of Suffolk*. The abbey was founded in 1182¹ by Ranulph de Glanville on a site nearer the sea, and now marked by a small ruined chapel. It was rebuilt in its present situation in 1363 by Robert

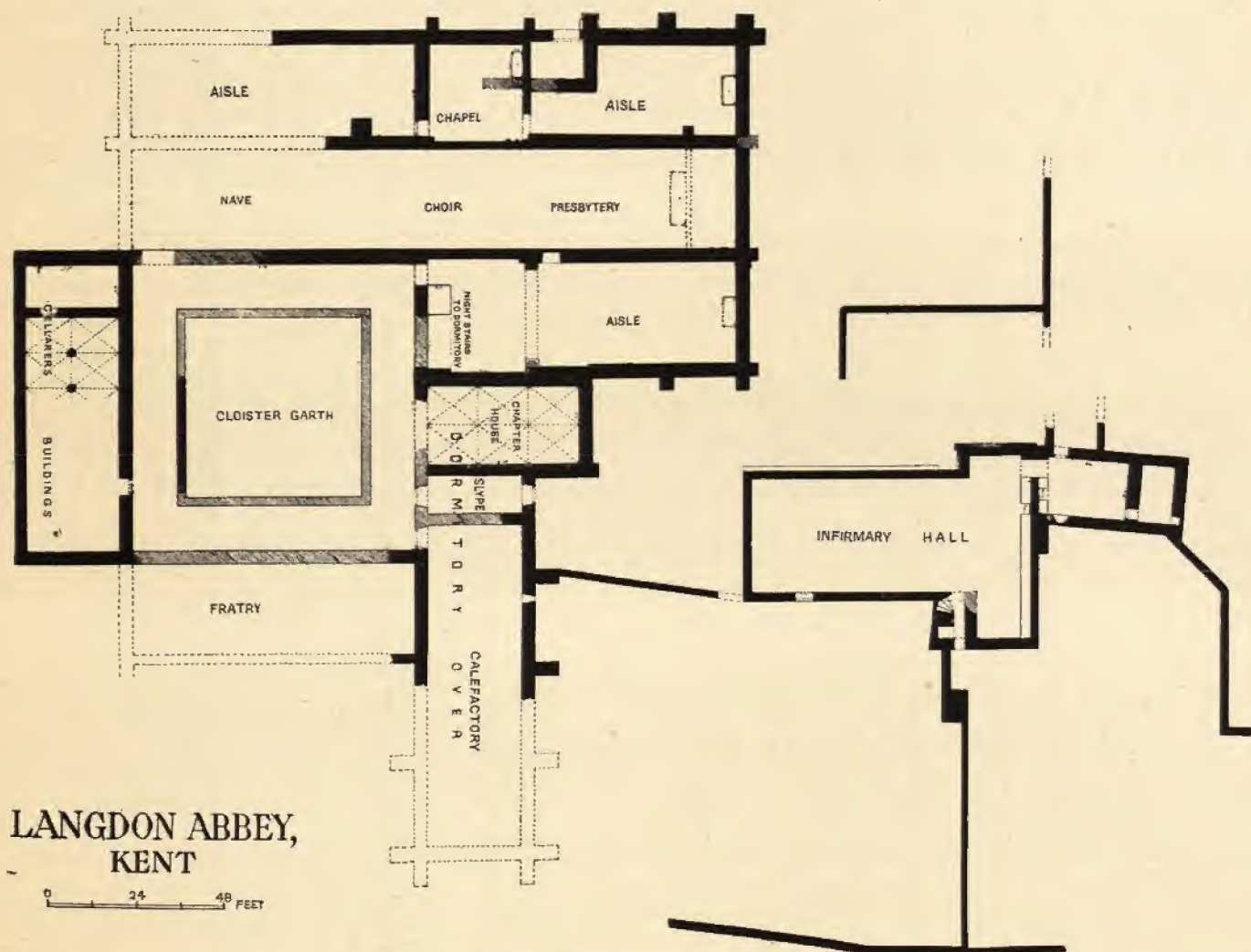


Fig. 10. Langdon Abbey, Kent.

Reproduced, by permission, from *Archaeologia Cantiana*, xv.

de Ufford, Earl of Suffolk. In 1389 parts of the buildings were destroyed by fire and marks left by the flames are still discernible in various parts of the cloister. An inventory taken at the Suppression² mentions besides the High Altar, St. Michael's and our Lady chapels, the altar of the crucifix, the vestry,

¹ See *V.C.H. Suffolk*, ii, p. 117.

² P. R. O. Land Revenue Bundle 1393, file 136 no. 1, printed in *Suff. Inst. of Arch.* viii, p. 102. Here the dedication of one chapel (as pointed out by Sir W. H. St. J. Hope) is incorrectly given as St. Margaret.

tower chamber, green chamber, red chamber, cloister, buttery, kitchen, bakehouse, and brewhouse. The existing buildings well illustrate the few facts of architectural history above detailed. The main structure of the church and

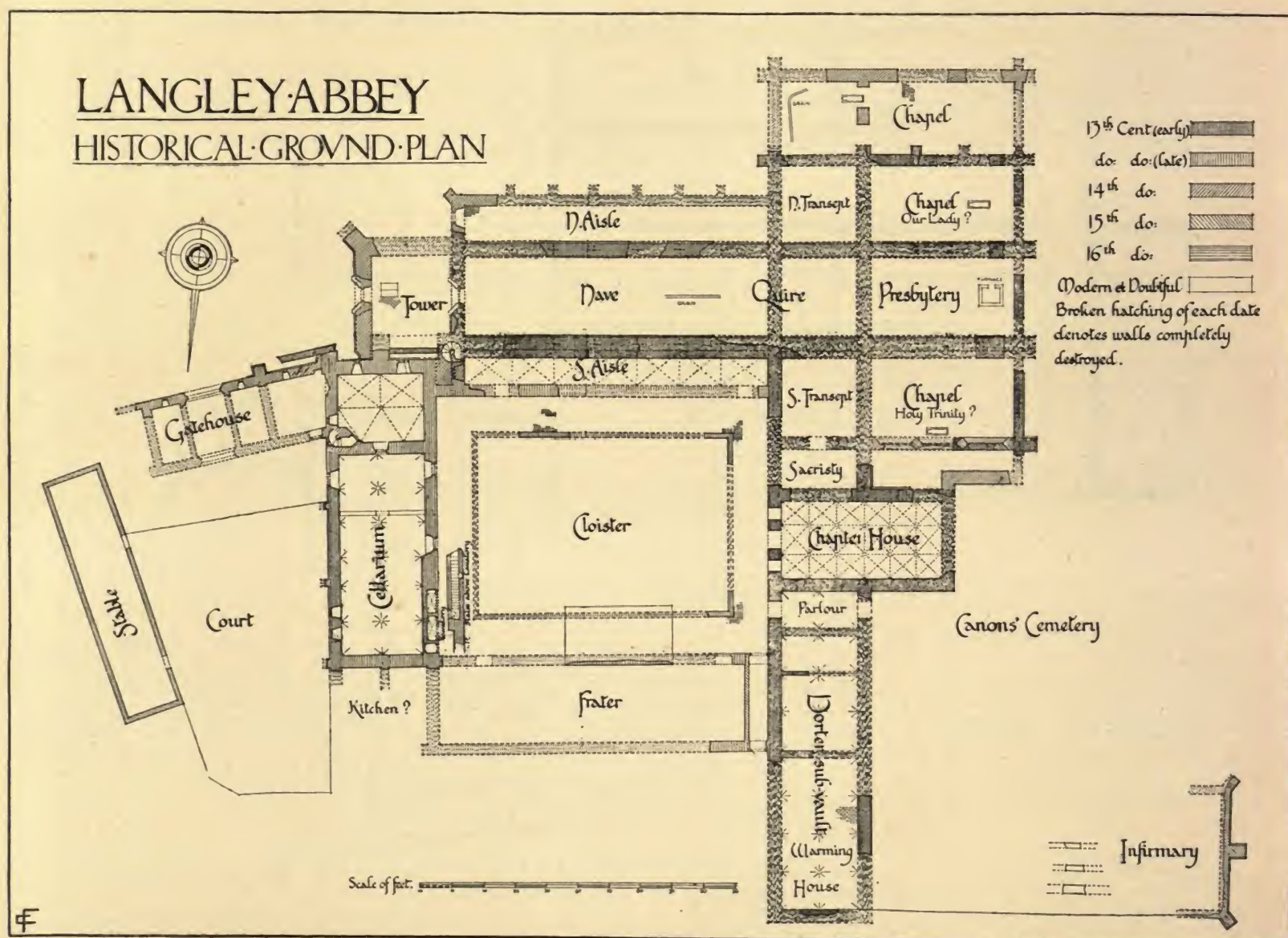


Fig. 11. Langley Abbey, Norfolk.

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claustral block is entirely of about 1360, but in it are incorporated considerable portions of the earlier building evidently removed and reset when the site was moved inland. The most important of these are the late twelfth-century east piers of the crossing, the early thirteenth-century arches opening from the transepts into the chapels, the early fourteenth-century east window of the north

chapel, and the thirteenth-century vaulting corbels in the western range. A few inserted and altered details in the cloister and the marks of fire already noted indicate the effects of the incident of 1389, and at this time also a low brick undercroft seems to have been inserted in the frater. The later work in the abbey is of small importance except for the elaborate early sixteenth-century porch of brick added to the western range. The surviving pier of the cloister arcade is inter-

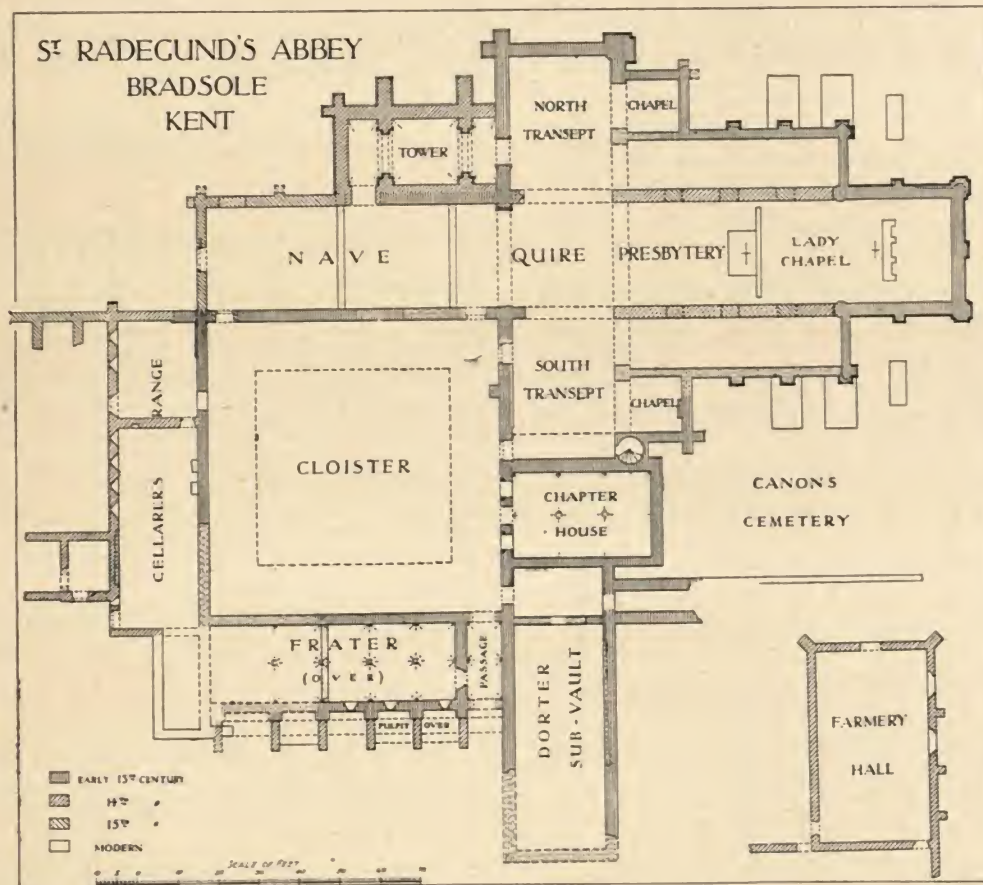


Fig. 12. St. Radegund's Abbey, Kent.

esting as showing that the plain rectangular openings must have had wooden lintels, and the tracery and subdivisions, if any, must also have been in this material. Other noticeable features of the plan are the two large apartments south of the church which seem to have both served as sacristies, and the rectangular building south of the dormitory; this may well have been the reredorter, but an apparently unnecessary distance separates it from the dormitory, and there are remains of a vaulted building west of it, which can only be explained by excavation. The position of the kitchen is also uncertain as both the west and south walls of the frater appear to have been external. The rest of the building is sufficiently explained by the plan (pl. XXI).

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NEWBO (Lincs.), about $\frac{1}{4}$ mile east of Sedgebrook village and just within the county boundary, is marked only by foundation mounds and trenches indicating where the foundations have been dug through for building material. The site of the church, cloister to the south of it, and chapter-house are perhaps identifiable.

NEWHOUSE (Lincs.). The site, in a small wood east of the lake in Brocklesby Park, is marked by extensive foundation mounds, in which the chalk rubble of the walls occasionally appears above ground. The main lines of the building can still be traced, the cloister being about 100 ft. square with the church on the north of it and a fairly well-defined chapter-house, of rectangular form, in the usual position.

ST. RADEGUND (Kent) (fig. 12). The existing remains consist of parts of the early thirteenth-century church, cloister, chapter-house, and dormer, the fourteenth-century tower, the frater transformed into a house, the western range, and fragments of the gatehouse and farmery. The eastern part of the church, the farmery, etc., were excavated by Sir W. H. St. J. Hope in 1880. See *Arch. Cant.* xiv, p. 140.

SHAP (Westmorland) (fig. 13) was excavated in 1888 by Sir W. H. St. J. Hope and the walls of most of the church and buildings round the cloister are still exposed, and stand a few feet high. The fifteenth-century west tower is the only building of importance standing above the general ground-level. See *Cumb. and Westmorland Arch. Soc. Trans.* x, p. 286.

SULBY (Northamptonshire) stood in the bottom of the valley two miles north of Naseby. The exact site is said to have been south-east of the abbey farm, but the ground affords no definite evidence of this. A small modern building near the house contains a few architectural fragments and a fine enriched coffin-lid, engraved in Boutell's *Christian Monuments*.

TALLEY (Carmarthenshire) (pl. xx). Part of the early thirteenth-century central tower and adjoining portions of the church are still standing and the whole church has been excavated. See *Arch. Camb.* 5th Ser. xiv, p. 229, and *Rep. Royal Com. Hist. Mons. Carmarthen*, p. 263.

TITCHFIELD (Hants) (fig. 14). Considerable remains of the thirteenth-century church and claustral buildings, transformed into a house at the dissolution, are still standing, but in a ruinous condition. Slight excavations were undertaken in 1893. See *Hants Field Club*, iii, p. 317, Sir W. H. St. J. Hope in *Arch. Four.* lxiii, and *V.C.H. Hants.*, iii, 222.

TORRE (Devon) (fig. 15). Remains of the late twelfth-century church, western range transformed into a house, and the fourteenth-century gatehouse adjoining it are still standing. See plan by Sir W. H. St. J. Hope in *Arch. Inst. Excursion Programme*, 1913.

TUPHOLME (Lincs.). The only portion standing is the south wall of the

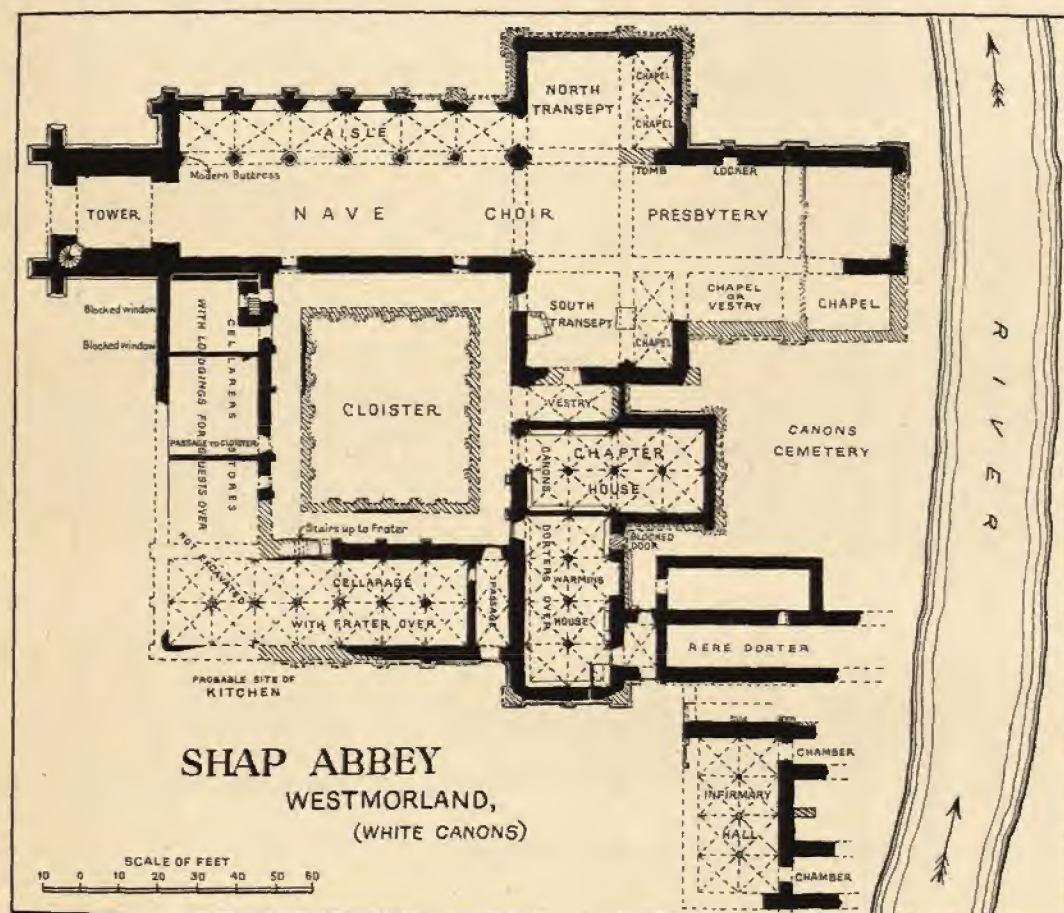


Fig. 13. Shap Abbey, Westmorland.

Reproduced, by permission, from *Trans. Cumberland and Westmorland Archaeological Society*, x.

thirteenth-century frater with its pulpit. The cloister and church were evidently to the north but have been entirely removed. See J. S. Padley, *Selections from the edifices of Lincs.*, for drawings and plan of frater wall.

WELBECK (Notts.). The mansion of the dukes of Portland now occupies the site, and if any of the walls of the monastic buildings still survive their extent and significance are unrecognizable.

WENDLING (Norfolk). The remains consist of a few fragments of rubble core including part of the west end of the church. These with the foundation

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mounds are sufficient to establish the general accuracy of the small plan, printed in *Norfolk Archaeology*, v, though the 'baying' of the nave is, no doubt, inaccurate.

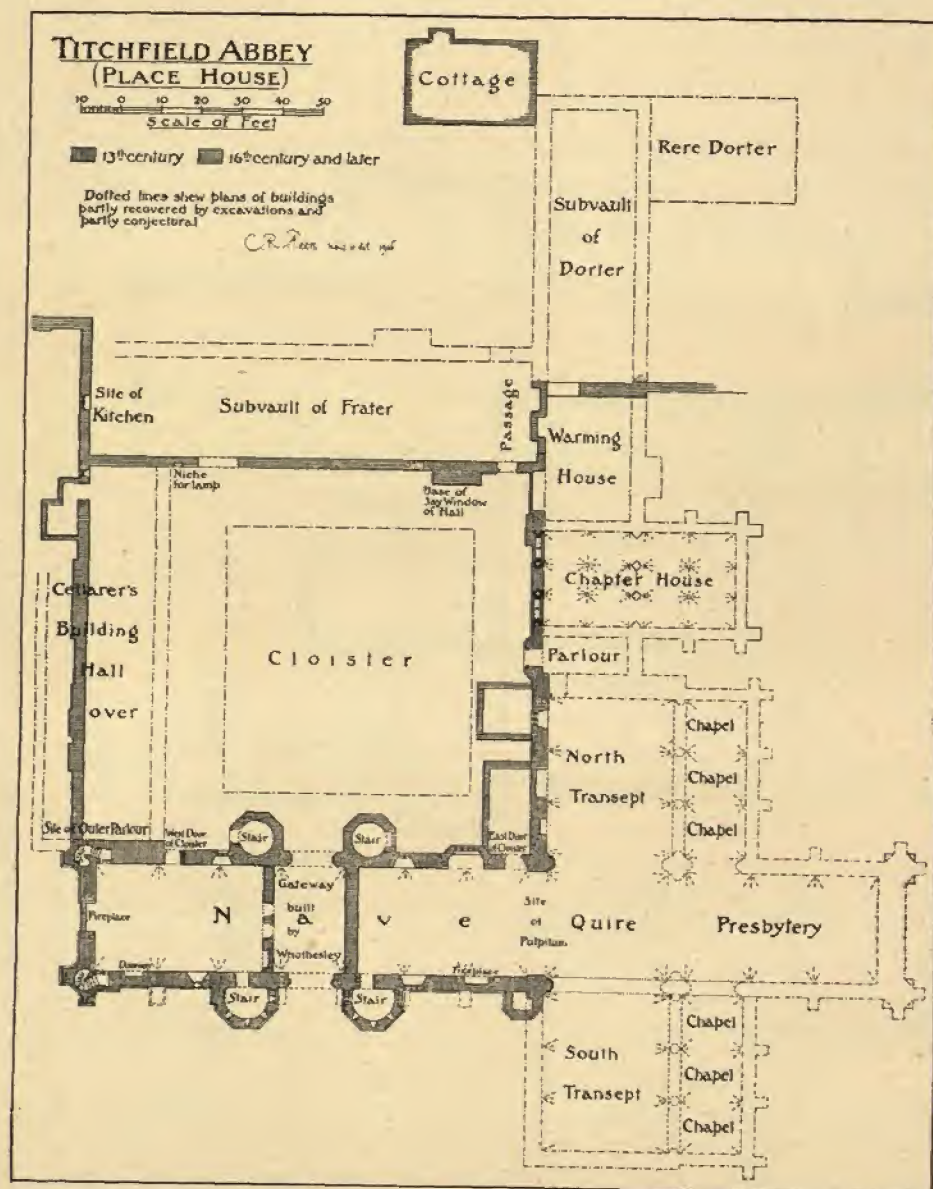


Fig. 14. Titchfield Abbey, Hants.

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B. Nuns.

BRODHOLME (Notts.). The site, just over the Lincolnshire border, is marked only by a farm-house which incorporates a few architectural fragments including one piece of fourteenth-century traceried panelling. The site is dyked round.

IRFORD (Lincs.), near Priory Farm, about one mile north-west of Binbrook,

TORRE ABBEY.

FROM A PLAN BY W. H. ST JOHN MERE.

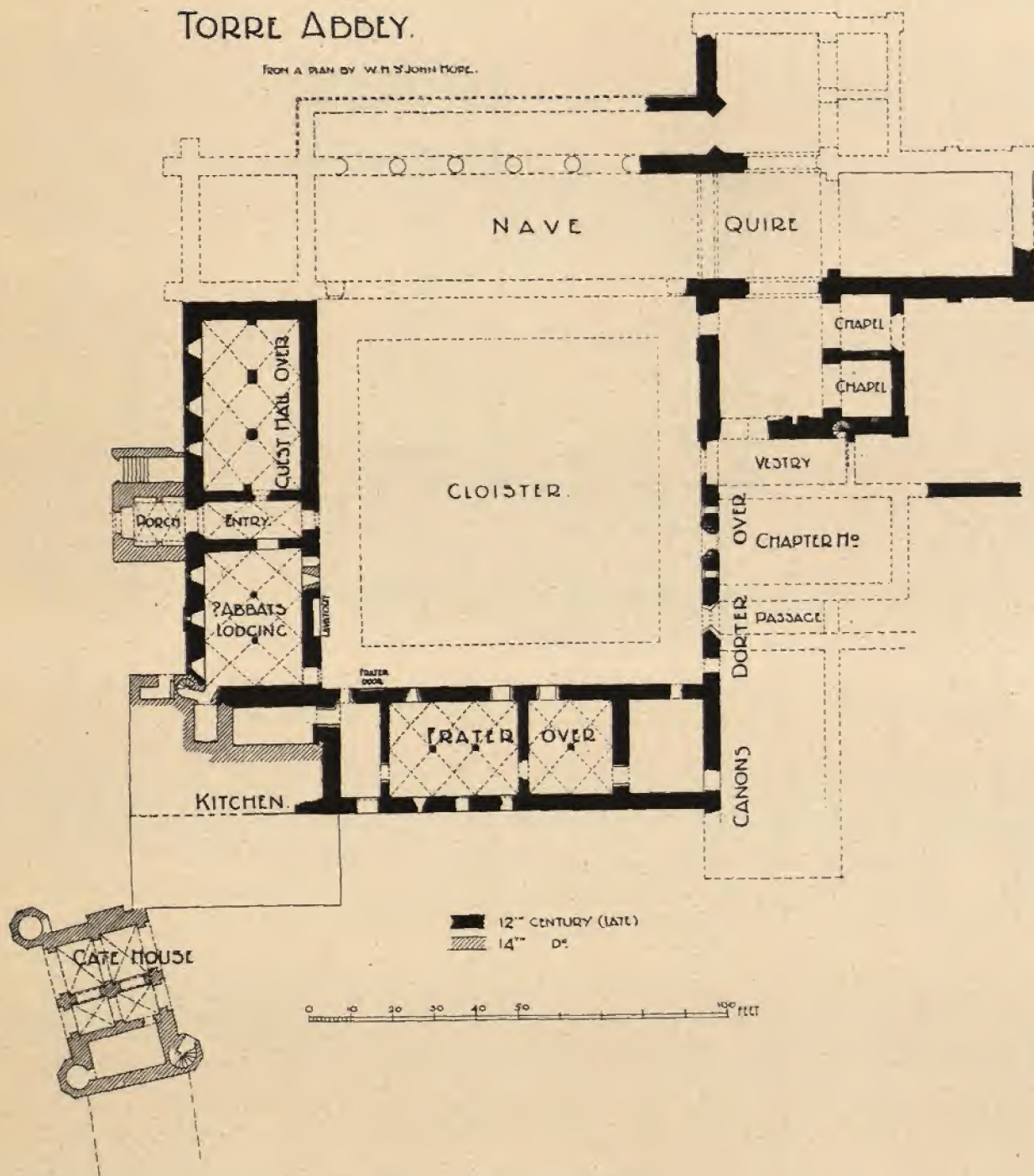


Fig. 15. Torre Abbey, Devon.

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has been entirely destroyed but the site is indicated by well-marked foundation mounds, though the lay-out is not recoverable without excavation.

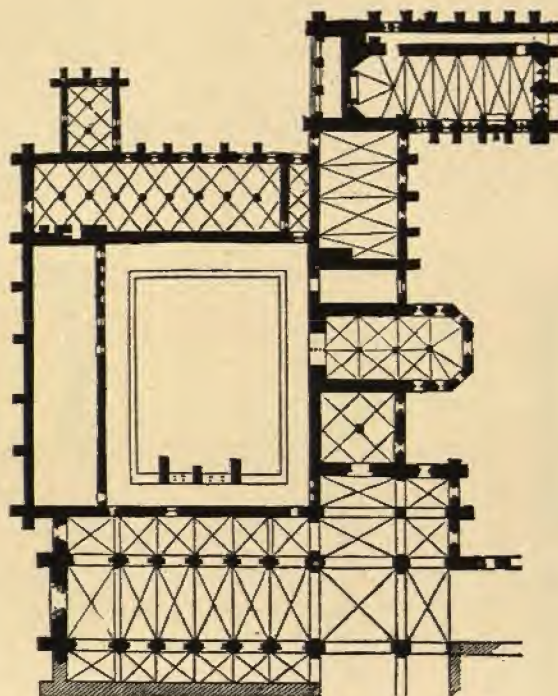


Fig. 16. Beauport Abbey, Brittany.

Reproduced from A. de Caumont, Abécédaire (no scale).

I have to thank Miss R. Graham, F.S.A., for valuable suggestions and assistance; Lord Granby, F.S.A., for very liberally placing his plans and photographs of Croxton at my disposal; and Mr. John Bilson, F.S.A., for assistance in the matter of the French houses of the order.

VII.—*A Saxon Village near Sutton Courtenay, Berkshire.* By E. T. LEEDS,
Esq., M.A., F.S.A.

Read 23rd November 1922.

It is not too much to say that our knowledge of the dwellings of the Anglo-Saxons, at any rate of the earlier period, has hitherto been practically a blank. Practically so, because discoveries evidently similar to those to be described and found only a few miles away at Yelford and Standlake, Oxfordshire, were recorded by Stephen Stone as far back as 1857, while more recently and close by at Milton, Berks., sherds have been collected by Professor Stenton of Reading University, which must undoubtedly have been deposited under similar conditions.

Professor Stenton has recognized these sherds as of Saxon date but has not had the good fortune to excavate scientifically the site from which they came, and Stone, as will be seen later, failed to recognize the significance of the finds he records, even though he had previously investigated a Saxon cemetery a quarter of a mile away.

Our knowledge of Saxon dwellings has been hitherto confined to the mental pictures conjured up by the often high-flown language of the earlier scalds—the hall of a great chief, a Heorot, ‘the timbered hall handsome and gold-adorned’, ‘firm with iron clamps, forged with curious art’, ‘with its lofty roof, adorned with gold’, and with its mead benches along either side and its central hearth.

The very fact that such buildings were described as being of wood seemed naturally to exclude all hope of discovering any trace of such a building or even of its humbler counterparts, but the finds at Sutton Courtenay will show that the remains of the latter class at least must be quite common and in addition offer a large measure of hope that the sites of more important edifices will some day come to light.

The initial credit for the present discoveries is due to Dr. C. W. Cunnington, a member of the family so long connected with Wiltshire archaeology, who in May 1921 wrote to call my attention to pits which he had noted in the face of a gravel-pit near the village of Drayton, Berks., and from which he had

recovered a baked clay ring and sherds; and to suggest that the site might repay more intensive investigation. The existence of several of these clay rings in the Ashmolean Museum and the fact that such rings had been assigned to the late-Celtic period on what seemed to be quite insufficient grounds made me particularly desirous of obtaining further evidence of their age.

After some preliminary visits when we obtained two more clay rings from the workmen and some sherds of hand-made pottery, we began excavations in July 1921 in the part of the pit where Dr. Cunnington had made his original discoveries. From that date the work was carried on with but few intermissions on one day of each week down to the end of April 1922, when all the pits until then exposed in the face of the gravel-pit had been entirely excavated or tested. Further work on newly-exposed pits has been carried out at intervals since that date, and is still proceeding.

The work has been done throughout by senior and junior members of the University of Oxford under my general supervision. During term members of the Oxford University Archaeological Society have taken part in the work, and they and other helpers have rendered valuable assistance. But I wish to place on record my especial indebtedness to three persons: first, to Mr. T. F. Hobson, F.S.A., who has very materially furthered the work, not only by his personal assistance, but particularly by obtaining from the owners of the properties the necessary permission to conduct the excavations; secondly, to Mr. R. T. Lattey, M.A., who has been my constant and often sole companion, and who, even when results were, as at times they proved to be, of a meagre and even dull nature, never allowed his keen enthusiasm nor his careful observation to slacken; and thirdly, to the Rev. Charles Overy, M.A., F.G.S., who besides helping on many occasions kindly undertook the survey of the site shown in the plan, and also took the photograph of the hearth in the pits west of house VII. The photographs of houses I, VI, VII, and X are my own.

The site of these excavations is a group of gravel-pits in the parish of Sutton Courtenay, situated on either side of the road which strikes south towards Milton from the road leading from Drayton to Sutton Courtenay, Berks., about half a mile east of the former village. Northward of the site the country falls rapidly away to low-lying ground situated to the west of the right bank of the Thames close to the sharp easterly bend which the river takes about a mile and a half south of Abingdon; to the south and the east a little distance away runs the stream which passes through Drayton Mill and Sutton Courtenay village to join the Thames near the bend, while on the west, one field away, runs the western boundary of the modern parish (fig. 1).

The main site is a large gravel-pit lying in the south-east angle formed by these two cross-roads. Here along the face of the gravel running nearly

east and west, and at right angles to the Milton road, the process of gravel-digging exposed several shallow excavations of varying size penetrating into the gravel to a depth of $1\frac{1}{2}$ to 3 ft. The very exposure of these ancient excavations meant that some part of their area had been destroyed before we could explore them. Eventually we were fortunate in finding others entirely undisturbed (fig. 2).

From information elicited from the workmen there would seem to have

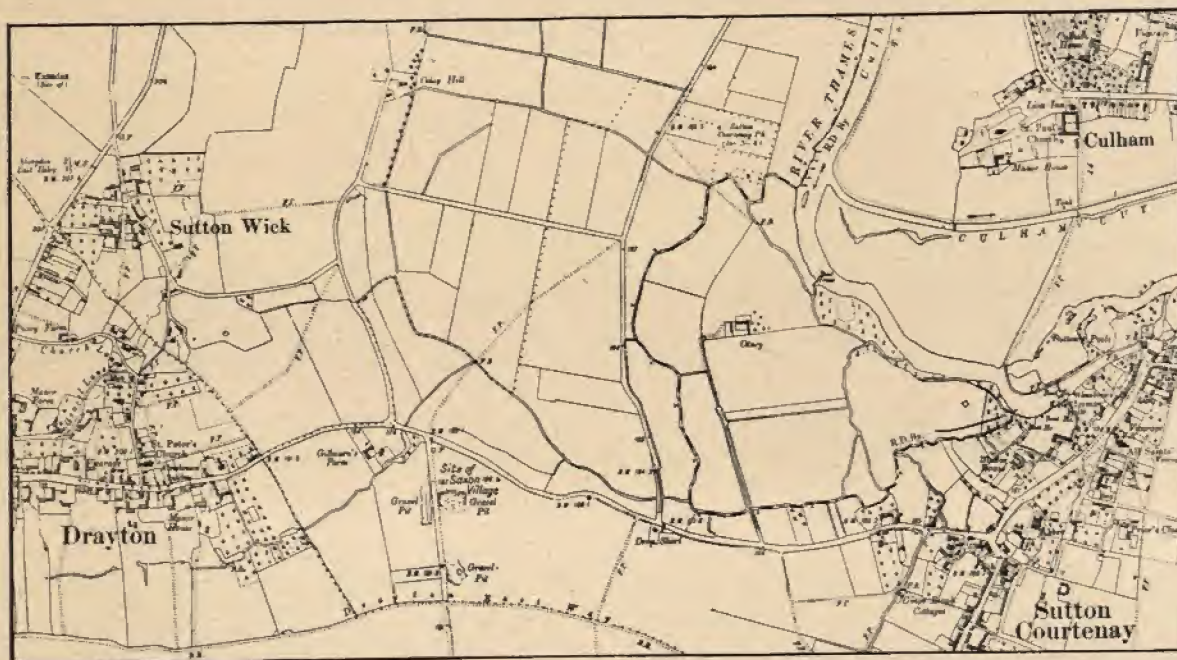


Fig. 1. Site of Saxon village, Sutton Courtenay, Berks.

Reproduced from the Ordnance Survey Map, by permission of the Controller of H.M. Stationery Office.

been a second line of pits parallel to the first some 15 yds. farther south, so that the settlement amounted at least to a small hamlet, and further removal of the gravel in a northerly direction may bring to light other pits and thus add to its size.¹

An interesting feature of the site is the evidence of its occupation during the Bronze Age, but so far no trace of a settlement between that period and Saxon times has come to light. It is true that pieces of Roman pottery have been found, but the litter of sherds such as always accompanies a Roman site is entirely wanting.

A gravel-pit on the west side of the Milton road also shows signs of Saxon occupation, but has so far not been explored; and in a third pit on the same

¹ At the time of going to press two houses in a new line northwards have already been excavated.

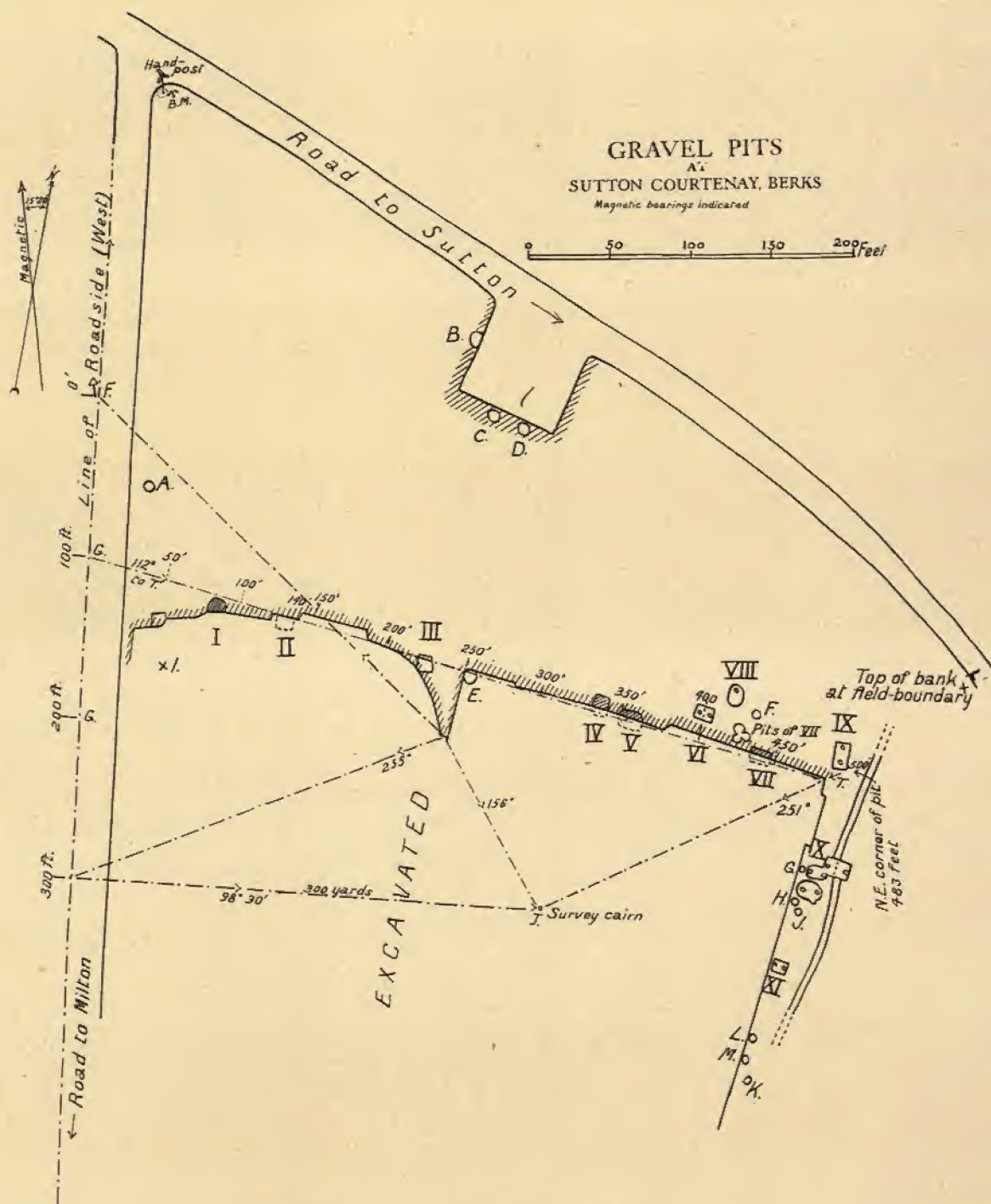


Fig. 2. Plan of Saxon village, Sutton Courtenay.

side of the road some 150 yds. farther southwards large excavations containing numerous broken animal bones have been exposed, as well as what look like Bronze Age pit-dwellings.

For the sake of clearness the Bronze Age pits are designated on the plan by letters and the Saxon houses by Roman numerals. These latter are described in order from west to east, not in order of exploration.

BRONZE AGE PITS.

Of occupation of the site during the Bronze Age there is ample evidence in the discovery of a large number of bowl-shaped pits, mostly circular, and of fairly uniform size. These pits are found to be filled in almost all cases with stiff reddish earth, and in this, as will be seen, differ from the Saxon houses.

A. This pit was rather oval than round, measuring 5 ft. one way and 4 ft. the other, and was 3 ft. deep. It yielded a few flint flakes. Close by but not undoubtedly from this hole itself one of the workmen found the fine barbed arrow-head, $1\frac{3}{4}$ in. long, of brown flint (pl. xxix, fig. 2).

B. From this pit in a cutting by the side of the road from Drayton to Sutton Courtenay came a fragment of a small celt or chisel of polished flint with a white patination.

C. Entirely cleared by the workmen. It produced some plain sherds and a few pieces of baked daub with the impressions of the wattle still clearly preserved. It may be remarked here that these are the only signs of daub observed by us during the whole course of our excavation of the site up to the present time.

D. Mainly cleared by the workmen but finished by us. At the bottom of the pit, which was 3 ft. deep, charcoal and traces of a clay lining were observed. In the filling we found sherds of Bronze Age pottery (pl. xxii, fig. 2). The majority of these belong to a large vase of the cinerary-urn type. The vase had been broken during the occupation of the pit, for, while the colour is uniformly red on the outside, on the inside some pieces were quite black, others of a pale buff colour. Most of the fragments have been fitted together to form three large sherds and in one of them pieces of two different colours were found to join one another. The vase has a collar 3 in. deep, decorated with hatched triangles executed by first incising rows of horizontal lines and subsequently adding the diagonal lines. It appears to resemble Abercromby, *Bronze Age Pottery*, ii, pl. lxvii, figs. 68-9.

Part of a smaller vase of more ornate type has a collar, 2 in. deep, ornamented with a trellis pattern bordered above and below by a single horizontal line, all in cord technique; the rim and the carination of the vase are decorated

with incisions. In form it must have approximated to Abercromby, ii, pl. lxxvii, fig. 67, from Brixworth, Northants. Another single sherd, blackish brown in colour, is decorated with diagonal cord-impressed lines.

E. There appeared to be the remains of a hole of the same class at this point, out of which a few sherds of Saxon pottery and some flint flakes were recovered by us. As coming from this pit the workmen gave us the small arrow-head, $1\frac{1}{4}$ in. long, of light-coloured flint (pl. xxix, fig. 2). A curious perforated piece of fossil-shell was given us along with the arrow. Its resemblance to a pendent amulet may be accidental.

F. This pit, which measured about 3 ft. in diameter and some $2\frac{1}{2}$ ft. in depth, contained three skeletons. The first, that of a woman, was removed by the workmen, but as the skull was described as having been encountered just below the cultivated soil, and as we found phalanges of the feet at the west side of the hole, it may, judging from the restricted dimensions of the hole, be concluded that the body had been buried in a squatting position with the face to the south-east, on the southern side of the pit.

In the northern half we found two small skeletons, one that of a child, lying in a crouched position with the face downward and the knees bent towards the north. Underneath this body was the skeleton of an infant lying on its right side with its face to the south. No relics were found.

G. This pit, situated a few feet west of room I of house X was entirely cleared by the workmen. From it they collected several flint flakes with a bluish patina as well as three flint scrapers. One, measuring $2\frac{1}{2}$ in. each way, and of rough serrated outline, has a high keeled back and has had the bulb of percussion struck off it, while the edge corresponding to the bulb shows signs of battering. Another, 2 in. each way, has a steeply chipped cutting-edge; the third is manufactured from a thin flake, measuring 2 in. by $1\frac{1}{2}$ in.

H. A circular pit 3 ft. in diameter and nearly 3 ft. deep, which yielded several flakes of flint with a bluish patination and broken animal bones. At the bottom of the pit was a largish stone.

J. Half of this pit, which was 4 ft. in diameter and 3 ft. deep, was dug away by the workmen. In the upper part of it they discovered Saxon sherds out of some of which the plain pot (pl. xxii, fig. 1, A), $3\frac{1}{2}$ in. high and 5 in. in diameter, has been reconstructed. The rest of the pit we were able to excavate ourselves, and from a thick burnt layer close to the bottom we recovered a pick made from an antler and more flakes of blue-patinated flint like those from the adjacent hole. Among them were two fine scrapers, one $2\frac{1}{2}$ in. long by 2 in. wide (pl. xxix, fig. 2, bottom row, nos. 3 and 4). The pick (part of what was probably a second was among the finds obtained by the workmen) is particularly noteworthy, because the basal tine which constituted the working end of the implement has been

hollowed out for a short distance and in the side is a fine, small rivet-hole¹ apparently made with a metal tool. The nature of the supplementary point secured by the rivet is unknown. A sherd of gritty grey ware with two keeled horizontal ribs was found in the same layer.

K. A circular pit, 3 ft. in diameter and 3 ft. deep, from which were recovered a second pick made from a red-deer antler and some sherds of thin gritty ware, red outside and black inside.

It is somewhat doubtful whether the next two pits to be described are of the same date. The evidence of the finds seems to point to a Saxon date, and in the light of some pits found near house VII this may be true.

L. Of the same dimensions and shape as pit K. It produced several more blue-patinated flints, other smaller flakes of a brownish hue, and a long white-patinated flake, in addition to a small quantity of sherds of Saxon pottery and one sherd of thick rough-faced red Roman ware. Some of the Saxon sherds were found at the very bottom of the pit.

M. The contents of this pit excavated by the workmen consisted of flakes of varying sizes, mottled brown, grey, one almost black in colour, some Saxon sherds, a fragment of a Roman (?) tile with scored linear decoration, the base of a brownish-black wheel-made Romano-British vase, $2\frac{3}{4}$ in. in diameter, with a hole bored through the middle subsequent to the firing of the vase, and finally a baked clay disc, a little more than $2\frac{1}{2}$ in. in diameter and $\frac{1}{2}$ in. thick, of gritty black ware with a slightly burnished light brown exterior and a large hole made before firing not quite in the centre (pl. xxvi, fig. 1, B and C).

On the east side of the site just before the ground begins to fall away gently in the direction of Sutton Courtenay village we discovered remains of a ditch. Behind rooms I and III of house X it measured 5 ft. across at the level of the gravel and 3 ft. deep from the surface. In places it was filled at the bottom with reddish earth like that found in the Bronze Age pits, and a lining of yellowish clay was detected at one or two points. At the top of the ditch were found some Saxon sherds, a thin iron key (pl. xxvii, fig. 1, P), and a little lower a portion of a quern-stone of (?) Andernach tuff. Further traces of the ditch were found 15 ft. east of house IX, where the filling of the ditch was for the most part of mottled grey clayey material. At this point the ditch was $5\frac{1}{2}$ ft. across and $2\frac{1}{2}$ ft. deep from the surface. As will be shown in the account of house X, one of the rooms lies across the line of the ditch and, as it is hardly likely that the Saxons would have excavated a room across a ditch which they themselves had previously dug, it seems probable that this ditch may mark the

¹ This hole was complete when found, but unfortunately was damaged in cleaning the pick, the antler being very weak at this point. Enough remains, however, to vouch for its presence.

eastern limit of the Bronze Age settlement in this direction. Its small size hardly admits of its being regarded as protective, especially as search has brought to light no post-holes for palisading on its inner side.

SAXON HOUSES.

In the course of our excavations and quite close to the Milton road at the western end of the main line of houses, we investigated a hole which externally on the face of the gravel-pit had all the appearance of a hut-bottom. We were, however, unable to trace it far, as, although it began well, its limits eventually became quite indeterminable. Its proximity to the road may have resulted in its disturbance in the past, but even so we could not ascertain whether it was undoubtedly a hut-bottom or a more recent excavation for gravel.

At the eastern end there was a gravel wall such as is found in the houses, and on turning the corner westwards a similar wall could be traced for 2 ft., at which point it was interrupted by a short gravel ramp leading from the floor of the excavation to the top of the gravel. Beyond this ramp all signs of the gravel wall entirely disappeared.

A few Saxon sherds were collected; also a short iron knife, $2\frac{3}{4}$ in. long and $\frac{5}{8}$ in. wide (pl. xxvii, fig. 1, c), and an imperfect bronze brooch of a well-known Romano-British type, with the spring and pin wanting, and the pin-catch broken (pl. xxvii, fig. 1, A). This last was found on the ramp itself.

We have met with a somewhat similar ramp elsewhere (see pits west of house VII), but never as yet in connexion with an actual house-bottom. It might have served for wheeling gravel out of the hole, and for that reason we have not included this excavation in the regular numbering of the house-bottoms, but have marked it on the plan as I*.

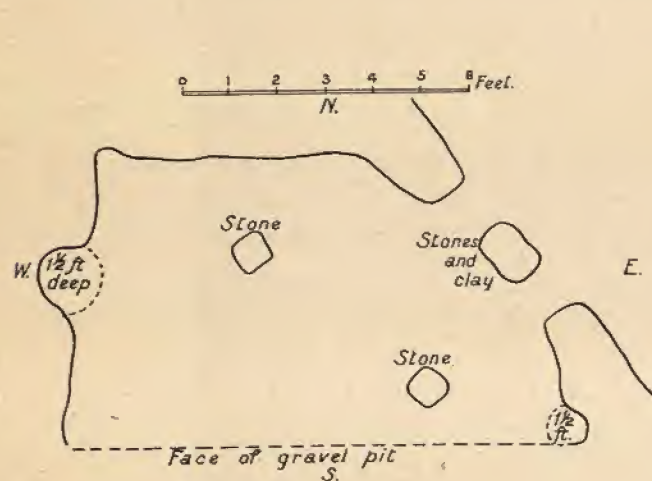
House I (fig. 3).

This house, as can be seen from the plan (fig. 3), is like many others singularly irregular in outline, though roughly of rectangular form. No traces of the southern wall could be detected on the face of the gravel-digging, so that it is difficult to say what the exact width was, a task rendered the more difficult by the position of the post-holes in relation to the northern wall. Its greatest length was 11 ft. and the floor lay 18 in. below the present surface.

In the middle of the short (gable) western end a post-hole had been sunk $1\frac{1}{2}$ ft. below the floor of the hut, and another similar hole came to light at the eastern end close to the face of the pit. In the north-west corner a small recess was formed by remains of a burrow, signs of which were noticed at another point.

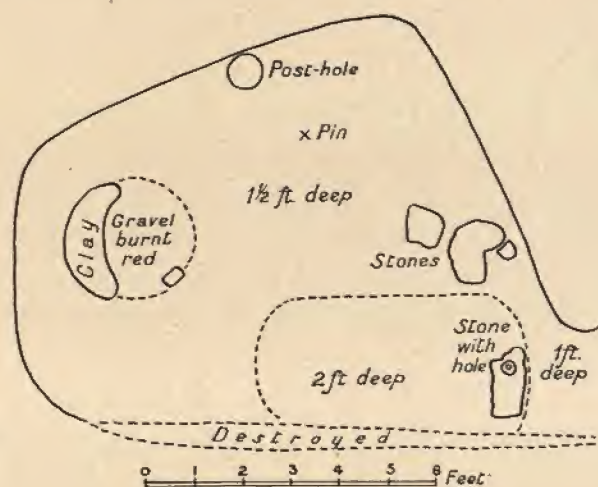
The north-eastern corner appeared to have been cut off and a doorway

placed across it, since at this point the gravel, which elsewhere reached to within 9 in. to 12 in. from the surface, was cut away to the level of the floor, leaving a gap a little over 3 ft. wide. In the middle of this gap stood a pile of stones and clay, some of the former reddened by fire. This would naturally suggest a hearth, but even if the burnt stone had belonged in the first place to a hearth, its present position in what must be the centre of a doorway cannot be other than deliberate. It is probable that it served as a stop for a pair of narrow folding doors, an inference to which weight is lent by the discovery just outside the gap of a typical iron T-shaped key (pl. xxvii, fig. 1, Q) of a more serviceable character than most of those associated with grave-finds.



HOUSE I

Fig. 3. Plan of House I.



HOUSE III

Fig. 4. Plan of House III.

Outside the door the gravel has been excavated to the level of the interior floor, thus leaving narrow projecting ridges of gravel on each side of the doorway. At first this was thought to be the entrance to a second room, but certain observations led us to conclude that what we had to deal with was no more than the depression which, in the absence of steps, is likely to be found round the entrance to a half-subterranean dwelling.

In the first place, to the left of the exit the gravel shelved up gradually to its normal height, instead of showing a vertical face as seen on the inside of the hut; secondly, the material excavated was soil with some admixture of gravel, not greatly differing from the ploughland and entirely unlike the dusty gritty filling of the hut itself; and thirdly, there was a notable paucity of sherds and other finds outside this doorway as compared with the quantity found so far in any of the hut-bottoms.

The finds from the interior of this hut occurred at practically all levels. Thus

bone pins (pl. xxviii, fig. 2, A, E, and F) were unearthed at depths of 12 and 15 in. from the surface, an iron pin of a brooch (pl. xxvii, fig. 1, N) at 9 in., and an iron chisel (pl. xxvii, fig. 1, D) on the floor itself, while sherds of pottery as in all these pits emerged throughout the filling from immediately below the cultivated surface. A small gaming-piece, cut from a piece of Samian ware (pl. xxviii, fig. 1, G), was included in the finds.

House II.

By far the greater portion of this hut-bottom was cleared away by the gravel-diggers, only a small fraction of it remaining for scientific excavation. This is the more unfortunate, as it is one of the few holes which has produced sherds of any size, and it is believed that one if not more fairly complete pots might have been recovered. Subsequent excavations in the soil thrown down by the gravel-diggers led to the recovery of more sherds, which further confirmed this view, since enough of one large pot was found to enable us to reconstruct its form, squat, with wide mouth 9 in. across, undecorated, 9 in. high and 14 in. in diameter. The generality of the sherds from these holes comprises fragments of many vases, from which it is seldom possible to fit more than a few pieces together. A curious bone implement (pl. xxviii, fig. 1, F) will be described later.

In the early part of 1922 we tested the gravel-face to ascertain whether any part of the hut still remained, but struck the north wall almost at once. The presence of a small gap, however, enticed us to pursue the exploration farther northward, where we found that the level of the gravel descended to a depth of nearly 5 ft., the filling to that depth being composed of mixed sand, gravel, and soil. Sherds of Saxon pottery, one a decorated piece, were found at the bottom of the excavation. This composite filling, as proved by other sections of almost identical composition exposed near by in the face of the pit, was the result of refilling after gravel-digging at some past time, not necessarily remote, and the sherds had been thrown in with the other material.

House III (fig. 4).

A little way east of the last house a new one was exposed early in 1923 and in the process its west wall was destroyed, but its line was indicated by the turn of the gravel at the north-west corner. It was a house of no great size and of quite irregular plan (fig. 4). The west wall must have measured 11 ft.; the north wall, which met it at right angles, was only a little more than 6 ft., while the south wall, 10 ft. long, lay at an angle of about 50° to the west wall, and formed a right angle with the east wall, which sloped back to meet the short north wall. The one post-hole preserved was near the middle of the east wall,

with the result that on the western side the house must have been wider than it was long. In the south-west portion of the floor was a rectangular depression $5\frac{1}{2}$ ft. long by $3\frac{1}{2}$ ft. wide, in the south-east corner of which lay a large slab of limestone, measuring 13 in. by 10 in. Towards one end of this slab was an artificial circular hole 3 in. in diameter and $\frac{1}{2}$ in. deep, with sloping sides and a boss $\frac{3}{8}$ in. high and $1\frac{1}{2}$ in. in diameter at its base left in the centre of the hole. Opposite this stone in the south-west end of the south wall, as first seen by us, the gravel seemed to have been cut down about 6 in. lower than the rest of the wall. This might have been due to the clearance of the top-soil from off the gravel by the workmen, but if original, it would indicate the presence of a door at this point, and the depression in the stone would have been made by a door moving on a foot which was probably shod with an iron ferrule. Either this ferrule projected beyond the foot, or the wooden part of the foot wore away with constant use and thus left the projecting boss in the middle of the hole.

Close to the west wall just east of the depression above mentioned were two large blocks of limestone. There was no stone hearth, but not far from the north wall the gravel floor showed signs of fire over an area about $2\frac{1}{2}$ ft. in diameter. At the north side of this area was a low clay wall burnt to a purplish brown colour, and between this clay wall and the wall of the house was a shallow trough 18 in. wide.

An iron awl (?), $3\frac{3}{4}$ in. long, and a few sherds, some of ornamented ware, were found mostly towards the southern end of the house. A perforated bone pin 4 in. long (pl. xxviii, fig. 2, B) lay on the gravel floor opposite the eastern post-hole.

House IV.

This house-bottom appears to have measured 10 ft. in length and about 7 ft. to 8 ft. in width. Of the south wall there remained only a projecting spur of gravel at the south-west corner next to the face of the gravel-pit. The outline of this house was quite irregular, at least as it presented itself on excavation. The floor was reached at $2\frac{1}{2}$ ft. below the surface. To a small pit about 7 in. deep in the middle of the western end there corresponded a hole at the east end about 4 ft. from the north-east angle of the hut, and close to the edge of the gravel-pit. It penetrated the gravel floor for some 2 ft., and, it was noted, sloped towards the wall of the hut at an angle of 50° with the vertical.

Sherds and animal bones were scattered throughout the filling, also fragments of at least seven clay rings. Parts of three hones of quartzite (pl. xxvi, fig. 1, H and I), half of a small crucible (pl. xxvi, fig. 1, F), pieces of slag and scoriae, a double-pointed bone pin, $3\frac{3}{4}$ in. long (pl. xxviii, fig. 2, G), a two-sided bone

comb, $6\frac{5}{8}$ in. long (pl. xxviii, fig. 1, D), a well-turned bone whorl with incised rings (pl. xxviii, fig. 1, A), and a fragment of an ivory bracelet (pl. xxviii, fig. 1, H) constitute the principal finds in this house.

An interesting object is part of a tile (pl. xxvi, fig. 2) baked to a brick-red colour, and decorated on one side with a linear pattern made by means of a wooden stamp carved with a graving tool or chisel, with shallower lines subsequently added with a pointed tool.

House V.

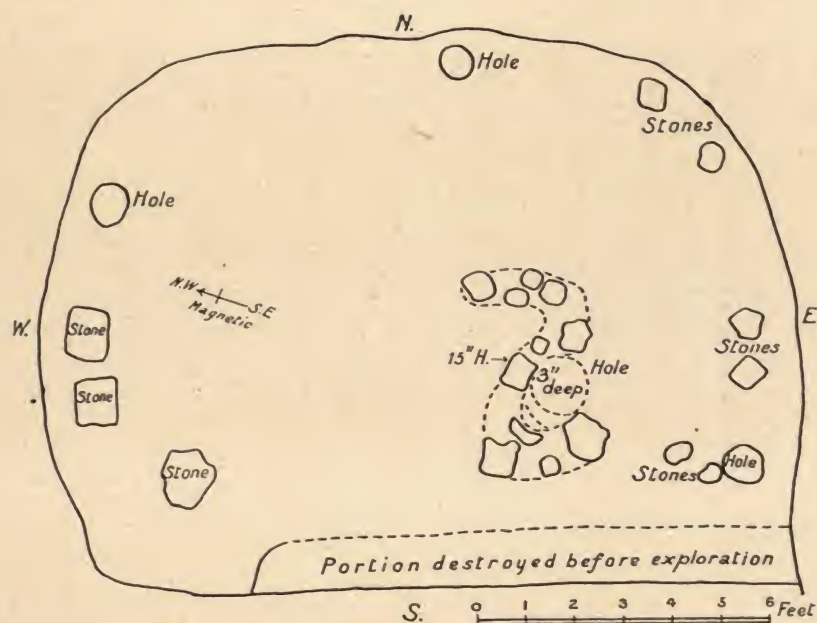
Since Dr. Cunnington had already reported his discovery in this hole of a clay ring (pl. xxvi, fig. 3, top row, left) and sherds of pottery, we undertook as our first task to complete the excavation of this house. The portion, not more than a third, of the floor-space preserved showed it to be roughly rectangular in form. The length was 11 ft. and the width, judging from the position of the western post-hole (that at the eastern end had been destroyed), was about 8 ft. This post-hole was of considerable depth, and like that already described at the east end of the last house showed a distinct outward slope from the top downwards.

The clay ring found by Dr. Cunnington lay close against the eastern end of the hole, as preserved, and thus almost in the north-east angle of the house. Two small fragments of pottery bearing round impressed stamps of Saxon type, and a flat oval band of bronze, the ring of a buckle (pl. xxvii, fig. 1, B), are the only other finds of special interest.

House VI (fig. 5).

This the most complete house which had been discovered up to June of 1922 was cleared out at different dates between then and the end of July. It lay some 25 ft. east of house V and a little distance north of the line of the other houses. It was found to measure some 16 ft. in length by $11\frac{1}{2}$ ft. in width, only a strip of the southern long side about a foot wide having been removed by the gravel-diggers before we were able to begin operations. The outline of the ground-plan is fairly regular (fig. 5), except that the two northern corners are rounded instead of right-angled. In the middle of each end a pair of large stones lay close to the wall, those at the western end resting on the gravel, while those at the eastern end were placed some 6 in. above the level of the floor on a ledge of gravel left when the main floor was excavated to a depth of $2\frac{1}{4}$ ft. below the surface of the surrounding land. No post-holes appeared behind these stones, as, it will be seen, happened in house VII; instead, holes like the post-holes in other houses were discovered on a line roughly corresponding to the diagonal axis of the ground-plan, that at the western

end about 3 ft. northwards from the centre of the two stones, the other $2\frac{1}{2}$ ft. south of the centre of the two stones at the eastern end. Another hole was found near the centre of the northern long side of the house; possibly a corresponding hole originally existed on the southern side which was destroyed when the pit was first exposed. If, as was assumed in the case of other houses, the holes at the short sides of the house were intended for the reception of the posts which supported the roof-tree, the roof in this instance must have been curiously out of alignment in relation to the floor. We may, however, compare



HOUSE VI

Fig. 5. Plan of House VI.

the position of the holes in house I, where they occupied much the same position as in the house under discussion. Two big stones, one a large rolled flint pebble, lay on the inner side of the hole near the south-eastern corner; two more smallish pieces of limestone lay in the rounded north-eastern corner, and a large block of limestone a little distance from the south-western corner.

The principal interest of this house was the discovery, at a point east of the middle of the house and rather more on the south than on the north side of the main east-and-west axis of the house, of a hearth in the form of a capital S turned backwards (see pl. XXIII, fig. 1). It was constructed of earth and clay with a line of stones along the top of the wall thus formed, other stones being incorporated in the wall itself. The majority of the stones were of limestone in roughly squared blocks or flat slabs; in addition pieces of calloused gravel and a large tourmaline pebble had been employed. The bottom of the northern section of

the hearth was in the same level as the main floor of the house itself; that of the southern section had been excavated another 3 in. into the gravel, that is to say, to a depth $2\frac{1}{2}$ ft. below the surface of the field.

The finds from this house were otherwise extraordinarily sparse. Apart from numerous broken animal bones, only quite a small quantity of sherds was recovered. These included six pieces of Samian or pseudo-Samian wares, Saxon pottery of the usual coarse hand-made type, and also portions of a vase of hard-baked ware with a well-burnished buff-coloured exterior, ornamented on the body with a zigzag pattern of double grooves, while on the upper part of the vase were two or more registers of a diagonal design of alternate rows of stamped crosses and rosettes. A few pieces of slag and scoriae, a wedge-shaped iron nail, a double-ended bone pin $4\frac{1}{2}$ in. long (pl. xxviii, fig. 2, H), a flat rectangular slip of cut antler about $2\frac{1}{2}$ in. long and $\frac{3}{4}$ in. wide and the third of the section of an antler of red deer sawn off square at each end (pl. xxviii, fig. 2, Q and R), pieces of Roman tiles, and a fragment of a baked clay ring were also found at different parts of the house.

In the wall of the hearth was incorporated a roundel (? a pot-lid) made from the bottom of a wheel-made Romano-British pot, $3\frac{1}{2}$ in. in diameter (pl. xxvi, fig. 1, A).

Professor G. Baldwin Brown honoured our excavations by his presence on the last day of the clearance of this house and kindly lent his assistance, particularly in drawing out the plan of the house.

House VII (fig. 6).

This house-bottom lay the farthest east of those which were explored in 1921 along the northern face of the gravel as then exposed. Its position was some 10 yds. east of the last.

It was one of the larger houses discovered, though little more than a half of the area of the floor was preserved for exploration; it also presented an appearance of more careful construction, the plan being more rectangular. It measured $15\frac{1}{2}$ ft. in length and originally must have been some 10 ft. to 11 ft. in width, since the post-holes at each end were situated 5 ft. to $5\frac{1}{2}$ ft. from the northern wall. The bottom lay 2 ft. below the surface of the plough-land.

The post-hole at the eastern end can be seen in pl. xxiii, fig. 2, at the right of the photograph and near the edge of the gravel-pit. That at the western end is immediately below the white cross, not being visible in the photograph. The holes were square and measured about $1\frac{1}{4}$ ft. across and 1 ft. deep. In front of each on the inner side were fairly large stones, as if intended to give additional support to the posts on that side.

In excavating the material which fills up these house-bottoms quite frequently sherds and other objects are found at all levels, but under such conditions that they cannot be said to indicate different floor-levels. In view of our ignorance of the circumstances under which these holes severally came to be filled up to the present ground-level, it is naturally impossible to say what disturbance took place between the time of their evacuation and their filling.¹

Matters stand, however, on a slightly different footing with regard to the hole under consideration. In proportion to its size the quantity of isolated

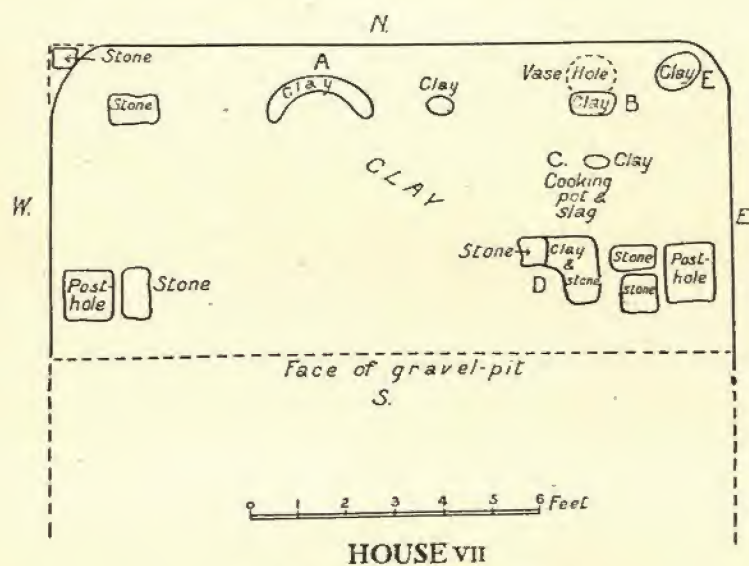


Fig. 6. Plan of House VII.

sherds scattered through the filling was inconsiderable as compared with those from other, and smaller, holes, but at a depth of about 9 in. to a foot from the surface sherds and bones, together with occasional pieces of clay, were as frequent as on the original floor itself.

In addition, at this upper level it was quite common to find pieces of calloused gravel about 2 in. thick (one was about 9 in. square) lying with their flat sides in the same plane as the lowest floor, suggesting material for a pavement. On the other hand, there was nothing distinctive in the nature of the soil itself at this upper level to indicate a floor, and similar pieces of calloused gravel occurred at the lowest level. A large stone in the north-west angle had also been placed at this upper level, but what purpose it served is purely a matter for conjecture, possibly as a footing for a corner post.

That the floor-level, however, was not always the gravel itself is suggested by

¹ We have since obtained clear evidence that the filling was as often as not the accumulated débris of long-continued occupation.

the position of the stones and other constructions found at the bottom of the pit. The tops of a stone near the north-west corner and of those in front of the post-holes were from 4 in. to 6 in. above the gravel, at which level several pieces of calloused gravel were found along the median line of the house.

Close to the northern wall (fig. 6, A) stood a little curved wall of unbaked clay measuring 6 in. in height and $1\frac{1}{4}$ ft. across the chord of the arc. In this clay wall was embedded part of a Roman bowl of hard light-grey ware, with flat bottom and straight sides widening upwards to a moulded rim. A foot farther east a small quantity of clay with bones and sherds below it came to light.

The principal discoveries were made at the east end. Here on the median line of the house a little way from the group of stones in front of the eastern post-hole and 3 ft. from the east wall was an amorphous construction of stones and clay, about 4 in. high (fig. 6, D); 2 ft. north was a heap of clay (fig. 6, B) with another small quantity of clay (fig. 6, C) about half-way between; and in the interspace there came to light a very large pot, completely smashed down. Reconstruction shows it to be a cooking-pot (pl. xxiv, fig. 1), 14 in. high and 15 in. in diameter. To a short neck, $8\frac{1}{2}$ in. wide at the mouth, succeeds a slightly flattened shoulder which joins at a well-marked angle a globose body. The body of the vessel is very similar to that of a chemical carboy. Round the centre of the body four large circular patches have been flaked off by heat and constant use. The vessel varies in colour outside from dark-brown to black; inside it is a deep red.

In the heap of clay (B) near the north wall was embedded a piece of a mortarium of pseudo-Samian ware, decorated with ∞ scrolls in white paint, and between it and the north wall a small depression, 1 ft. in diameter, penetrated the gravel for about 6 in. (plan, north of B). In and around this hole were fragments of a second pot, which on repair proved to be a wide, rather straight-walled vessel with flat bottom; the walls curve in slightly at the top to a moulded rim; light-brown in colour outside and grey to pink inside. Its dimensions are: height 10 in., diameter at the mouth 9-9 $\frac{1}{2}$ in., at the widest point 11 $\frac{3}{4}$ in. (fig. 7).

This pot had been broken at the time of the evacuation of the house or earlier, since portions of it were found within 2 ft. of the western wall and also under the small heap of clay to the east of the curved hearth.

Behind the depression in which the pot lay was a large lump of clay close to the north-east corner (fig. 6, E; in front of the white card in pl. xxiii, fig. 2).

These heaps of clay being unbaked cannot have formed portions of a hearth, but were probably collected for making clay rings. One of these, burnt to a brick red (pl. xxvi, fig. 3, top row, no. 2), lay close behind the larger pot, some

9 in. from the western wall. This, except for two or three other fragments, was the only sign of these rings in this house. Underneath and around the large pot were numerous pieces of iron scoriae, one of which was found adhering to a part of the rim. A perforated bone pin (pl. xxviii, fig. 2, c) came to light in the centre of the excavated area, and a double-ended bone pin or stiletto, $3\frac{3}{4}$ in. long (pl. xxviii, fig. 2, i), was recovered in filling in the pit.

Pits, West of House VII.

About 8 ft. west of this house later operations disclosed the presence of a circular pit (fig. 8, 1) some $4\frac{1}{2}$ ft. in diameter at the top and about 3 ft. deep.



Fig. 7. Vase from House VII (c. $\frac{1}{3}$).

On the south and west, and along part of the north sides, the walls of the pit were steep, but on the east side a ramp leading down to the pit accounted for about half the height. Pieces of callous were noted at various levels and places round the pit, suggesting that it had been steyned to prevent the gravel-wall falling in.

The portion of the wall answering to the north-west quadrant of the circumference was, as noted above, steep, and at the north of the circle the gravel-wall ran off to a point eastwards (fig. 8, B), leaving a gap between this point and the bottom of the ramp on the eastern side of the pit. This gap seems to have formed a passage which gave access to a second pit (fig. 8, 2) to the north of pit 1. The distance between the point (B) of the north wall and the gravel at its original level on the east side was 3 ft.

The wall of pit 2 curved back westwards from the point B, thus leaving

a tongue of gravel between the two pits. The northern face of this tongue showed a shelving face, probably due to the collapse of the gravel at this point, since the western wall was as steep as in the first pit. The depth of the pit was again 3 ft. The eastern side of this pit was bounded by a low gravel-bank about 1 ft. high. This bank was of varying width, since the original surface of the gravel followed an irregular line on this side, leaving a marked promontory opposite the centre of the pit, while the inner edge of the bank itself, after continuing the circumference of the circle from the southern side of the pit, receded in an eastwardly direction, leaving another promontory (D) on the lower level.

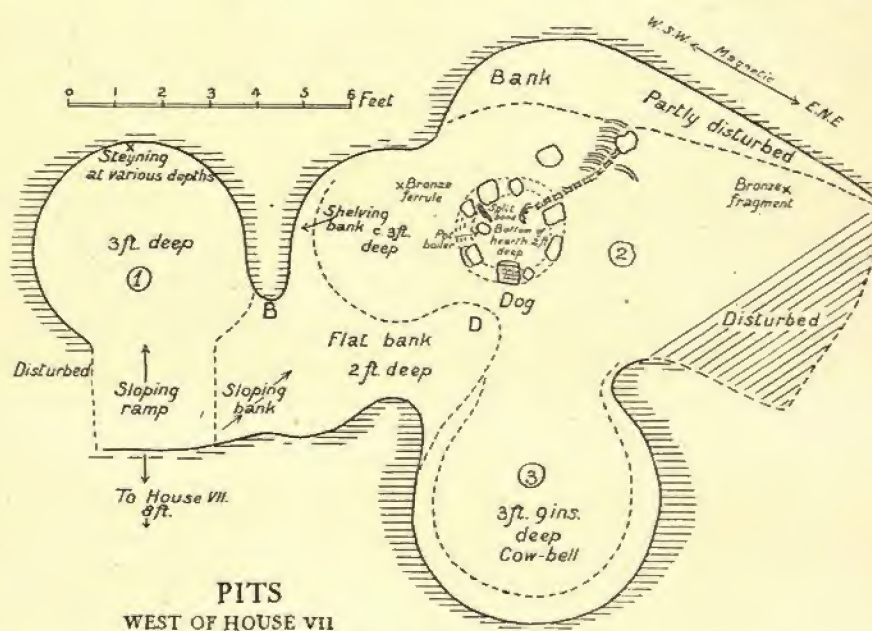


Fig. 8. Plan of pits, W. of House VII.

No steining was observed on the southern and western sides of pit 2, but some 30 in. from the west and south walls stones began to appear at levels varying from 1 ft. 3 in. to 2 ft. deep. These eventually proved to belong to a circular construction about 2 ft. in diameter and built by placing a ring of stones on a patch of earth mixed with gravel and without the use of mortar (pl. xxv, fig. 1).

The ring was composed of a few largish pieces of limestone and callous, others of smaller size of limestone, callous, and grey trachyte (?), and at one point a well-fired brick or tile $1\frac{1}{2}$ in. thick. Several pieces of similar brick had been found from time to time in these huts, but this was the first time we obtained real proof that they were not a later intrusion. In the present state of our knowledge it is reasonable to assume that they were carried off from some Romano-British site.

The floor of the ring was reached at a depth of 2 ft. from the surface, and the discovery of a large oval stone reddened by fire (pot-boiler) inside the ring and of a pot-lid made from the base of a Roman vase near by (pl. xxvi, fig. 1, D) suggests a hearth, though here as elsewhere on suspected hearths the quantity of charcoal mingled with the soil was extraordinarily small, and a definite burnt layer, whether of charcoal or earth such as that in pit J, was entirely wanting. On the other hand, hardly anywhere—and that is saying a good deal—have animal bones been met with in such profusion within an equal compass, chiefly from about $1\frac{1}{2}$ ft. to $2\frac{1}{2}$ ft. below the surface. A small piece of the usual unbaked clay was found at the bottom on the eastern side and within the area enclosed by the stones.

In the bottom of the ring were also found a piece of split bone and a horn-core which had been cut along its lower edge (pl. xxviii, fig. 2, s). The pair to this core, also with similar traces of cutting, was found outside the ring of stones.

At the level of the top of the stones forming the ring and within it the skull of an old horse of small size came to light, and this apparently belonged to a complete skeleton, the bones of which stretched away northwards.¹ How the animal came to be in this position it is impossible to say, but two points are worthy of remark, first, that one of the cervical vertebrae, with a small piece of Saxon pottery just below, lay close against the piece of brick already mentioned and between it and a small stone; secondly, that a large stone lay immediately above the vertebral column some 2 ft. from the edge of the ring. It is nevertheless probably a later burial, accidentally placed at this point. On the east side of the hearth and between it and the bank of gravel were found the skull and some bones of a dog,² while part of a small bronze ferrule (?) and a thin fragment of bronze plate came to light on the west side.

Reference to the plan will show a circular pit (fig. 8, 3) on the east side of this complex excavation. This pit, to which access was obtained from pit 2, measured $5\frac{1}{2}$ ft. in diameter at the top and 4 ft. at the bottom, which was reached at a depth of 3 ft. 9 in. from the surface. A few sherds of pottery and a damaged iron cow-bell were found here (pl. xxvii, fig. 2, D).³

The line of the north side of this complex of pits is rather hypothetical, as we were unable to clear this portion entirely in advance of the gravel-digging.

¹ It was disturbed before it could be completely excavated.

² Of the size of an Irish terrier. For this identification and of other bones found on the site I am indebted to Dr. A. Smith Woodward, F.R.S., and Dr. C. W. Andrews, F.R.S., of the British Museum (Natural History).

³ Another, rather more perfect (pl. xxvii, fig. 2, B), was found by the workmen in the cutting on the Sutton Courtenay road.

House VIII (fig. 9).

This house lay a little north of the main line of houses and was orientated north and south, instead of east and west as in the majority of cases. In form it somewhat resembled a broad bean, since there was a marked inward bulge in the middle of the east wall and all the corners were rounded off. It measured

13½ ft. in length and 9¾ ft. wide, and was 1½ ft. deep. A post-hole was found at the north end, but no trace of the southern post-hole could be discovered. In the south-east corner was a large squared piece of limestone and a smaller piece in the north-east corner, with two others close to the middle of the east wall. In the centre of the floor was a rough horseshoe-shaped construction of earth and stones, some 2½ ft. long, with two horns on the east side, between which was a large flat stone, evidently constituting a hearth. Close to it was found the base of a Roman pot, such as has been found in several of the houses in or close to the hearths.

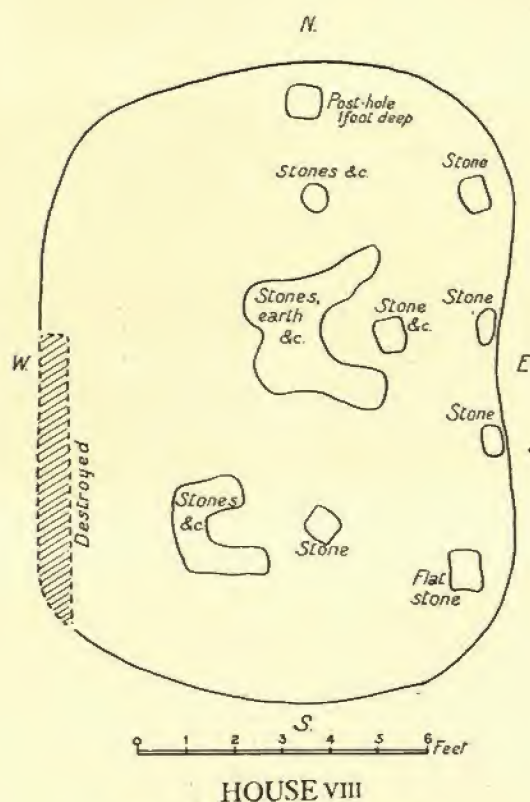


Fig. 9. Plan of House VIII.

a fragment of glass, a small piece of a clay-ring, and one large and other smaller lumps of slag.

House IX.

This house consisted of a large rectangular room measuring 17½ ft. long and 10½ ft. wide and originally 1½ ft. deep, with its short walls at the north and south ends. The northern post-hole was as usual close to the wall, but that at the south end was situated on the median line of the house and 3¾ ft. from the wall. Numerous stones of varying sizes were found, chiefly in the northern half of the room, but, except that near the centre of the room large quantities of blackened earth appeared and one of the stones, an enormous flint pebble, was reddened

by fire, nothing in the nature of a hearth was detected. What appeared to be a low wall of earth, capped at intervals by stones, that at one end being the large pebble already mentioned, could hardly be regarded as the back of the hearth, since it measured some 9 ft. in length and in addition was placed aslant the north-east corner of the room in a position which makes its purpose difficult to conjecture.

From the filling was recovered only a small quantity of sherds, several of the largest pieces of which belonged to a fair-sized vase, of a high globose shape; a plain bone spindle-whorl (pl. xxviii, fig. 1, c); a bone stiletto, only $2\frac{5}{8}$ in. long (pl. xxviii, fig. 2, k); part of a single-toothed bone comb, $7\frac{3}{8}$ in. long, decorated with incised ring-and-dot pattern (pl. xxviii, fig. 1, b), and part of a double-toothed comb similarly decorated; a splayed chisel (pl. xxvii, fig. 1, k), 3 in. long and $1\frac{5}{8}$ in. wide across the blade, the blade of a spokeshave (?) (pl. xxvii, fig. 1, l), and other pieces of iron, some of them probably portions of the hooping of a wooden vessel (pl. xxvii, fig. 2, g); others on being repaired, formed a long plate shaped like a pair of wings, originally about 9 in. across, which had been riveted at the middle to a \diamond plate $2\frac{1}{4}$ in. high (pl. xxvii, fig. 2, a). The rivet is burred so close to the metal that it is difficult to believe that the object was secured by the rivet to any other material at this point, and the presence of other rivets is not to be detected. The purpose of the object awaits determination.

In none of the other houses have such enormous quantities of broken animal bones, ox, sheep, deer, pig, etc., been discovered. They were particularly remarked at a level corresponding to the top of the stone-capped earth wall, which may indicate one of the occupation-levels.

House X (fig. 10).

Room I.

On the east side of the pit some 20 yds. south of the main row of houses and approximately occupying a position at the end of the row of pits, which the workmen assured us they had excavated before we began excavations on this site, and also separated by no more than 3 ft. from the circular pit G out of which three scrapers and other flints were recovered (*supra*, p. 152), a room $11\frac{1}{2}$ ft. long by 8 ft. wide came to light. It was orientated in the same line as the majority of the houses, and had originally been sunk $1\frac{1}{2}$ ft. into the gravel, with post-holes penetrating the gravel for another 14 in. excavated partly into semicircular recesses at either gable-end. The corners of the room were slightly rounded, more so at the western than at the eastern end.

In many of the houses previously discovered signs of long-continued occupation have been suggested, and, in some, signs of distinct floor-levels, but in none has this feature come out more clearly than in the present instance.

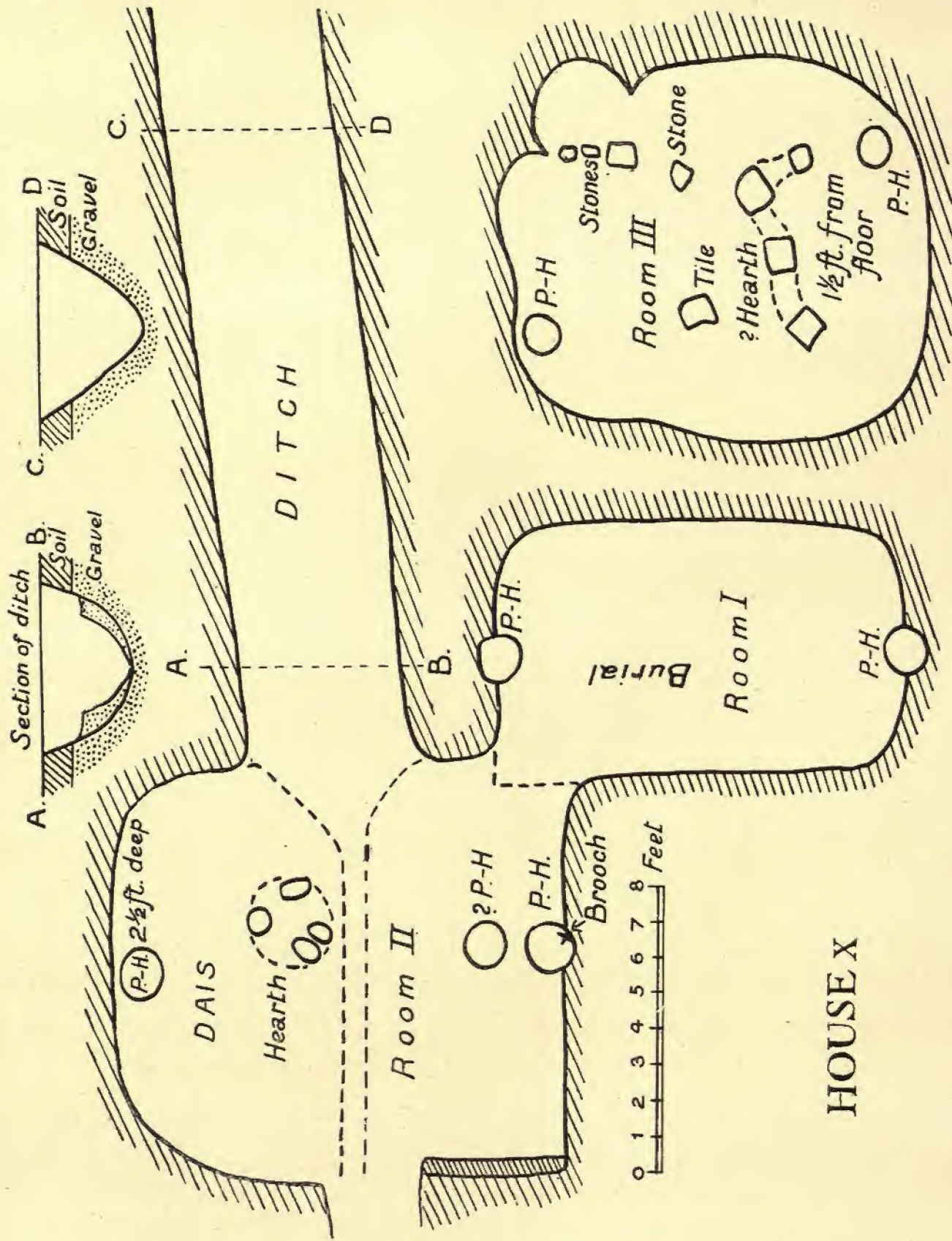


Fig. 10. Plan of House X and part of earlier ditch.

The quantity of sherds from this room was relatively small, but immediately below the surface of the filling at the western end were found a bone stiletto, $5\frac{3}{8}$ in. long, cut out in the rough and unpolished (pl. xxviii, fig. 2, j), and the iron pin of a large brooch, $4\frac{3}{8}$ in. long (pl. xxvii, fig. 1, o), like that from house I.

Near the middle of the room, at about the same depth, was found part of a double-toothed comb (pl. xxviii, fig. 1, i), which with the sherds already mentioned constituted all the ordinary finds.

On the floor of the gravel, however, some 5 ft. from the west wall and a little north of the median line a human skull came to light. This proved to belong to an adult man lying in an outstretched position, with head orientated WNW. The right arm and right leg were outstretched in a normal manner, but the left arm was bent across the body and the left leg was bent under the right. By the left side was an iron knife, $4\frac{3}{4}$ in. long (pl. xxvii, fig. 1, g), and by the right femur a double-toothed ivory comb, $5\frac{5}{8}$ in. long (pl. xxviii, fig. 1, e). The relics are such as can be paralleled from many Saxon burials, and had the house been filled in with earth after the burial and deserted, the burial would have differed but little from many Saxon burials, except for the fact that the body was buried in a house instead of in a specially prepared grave. But after deposition on the floor of the house the body was covered with what may be termed a blanket of clay, which close to the north wall of the room lay on the gravel itself. At a point corresponding to the middle of the body and about a foot from the wall this 'blanket' was 3 in. thick (pl. xxv, fig. 2, in front of the knife, left foreground), thinning out to an inch or less some 3 ft. from the west wall. As large lumps of this clay were found in the filling over the body itself, it is clear that this blanket must originally have covered the entire body in a continuous mass, but became disintegrated with the gradual collapse of the skeleton, only preserving its form where it lay on the firm floor.

The skeleton was that of an adult man in the prime of life, between 30 and 40 years of age, but nearer the former figure. Well-built, of athletic, muscular frame, it has all the appearances of having belonged to a man of superior rank in life. It compares well with many skeletons from Saxon graves, and thus may be assumed to be that of one of the invaders, among whom the relatively early date of death has more than once been the subject of comment.

Whether the posture in which he was found represents that in which he died and which became fixed when *rigor mortis* set in, or whether he was brought into the house and deposited in that posture after *rigor mortis* had relaxed, it is impossible to say at present. Careful examination of the skeletal remains may reveal something which may aid towards a solution of this point.¹

¹ I am greatly indebted to Mr. L. H. Dudley Buxton, M.A., F.S.A., of the Department of Human Anatomy in the University of Oxford, for examining and reporting upon the skeleton, which was

Further evidence of reoccupation was observed in the north-east corner. For a foot in height from the gravel floor the gravel walls met at this corner (marked by the trowel, pl. xxv, fig. 2) in a right angle, but above that level the gravel had been broken through to form a narrow doorway, 3 ft. wide, aslant the corner of the room, leading into a second room which had been laid out with its south-west corner contiguous to the north-east corner of the first, thus affording a parallel to the doorway discovered in house I.

Room II.

This room, though rectangular in outline, eventually presented one or two features not previously observed. It measured $13\frac{1}{2}$ ft. by $11\frac{1}{2}$ ft., and thus was more nearly square than any room hitherto excavated. Like room I it had a post-hole roughly at the middle of each short wall, but 2 ft. in front of the western hole was another of equal depth (some 18 in.), the purpose of which it is difficult to conjecture. The area of the floor was divided into two approximately equal portions (that at the eastern end being 7 ft. long) by the gravel at the western end having been excavated to a depth of 18 in., while the level at the eastern end was 6 in. higher, thus forming a raised platform. On this platform, a little south of the long axis of the room and close to its western edge, there were a few stones belonging to a circular hearth $2\frac{1}{2}$ ft. in diameter. Also on the platform, extending from its edge some 3 ft. along the north wall, there appeared to have been a low bank about 4 ft. to 5 ft. wide, as indicated by a very pebbly stratum about a foot above the gravel. This may, however, have been accidental, as at any rate the bank contained bones and sherds as found in other parts of the house.

The southern wall was found to end at $3\frac{1}{2}$ ft. from the eastern wall, leaving a gap of about 6 ft. beyond with walls running at right angles from each corner. There was also a gap in the northern gravel wall, which was in part due to the breaking through of the wall at this point by gravel-digging beyond.

In front of the platform a narrow width of the gravel floor was stained a dark red, and this colouring penetrated into the floor some inches. At the line of the gap in the south wall this dark band passed into a wider band of reddish earth. This proved to be the filling of the ditch previously described (p. 153).

Throughout this room at about 15 in. from the floor there was a well-marked dark greasy band, which from the fairly frequent presence of broken bones in it would seem to indicate a late occupation at this level.

The quantity of sherds and bones from this room was not large. Of the removed from its position for transference to that Department by him and by Miss Beatrice Blackwood, M.A., of the same Department, who also rendered valuable aid in the work of uncovering the skeleton in the first instance.

sherds several belonged to a very thick vessel; some dozen were of grey Roman wares. A fragment of decorated Roman glass was also found.

From this room came the first piece of definite evidence of the date of the village in the form of a brooch of the so-called equal-armed type (fig. 11). It was found on the level of the gravel floor of the room, tucked away behind the western post-hole, where it had doubtless been placed for safety. A description of the brooch, together with an estimate of its significance and of that of other finds in this house, is deferred to a later stage of this paper.

Room III.

This room differs in several respects from the rest of those which have been



Fig. 11. Equal-armed brooch, silver gilt, from House X (3).
(Right-hand upper corner restored)

explored up to the present time. Not only was it considerably deeper, namely 3 ft. below the surface of the field at its greatest depth, at and around the middle of the house, with the floor sloping upwards a matter of 6 in. to the walls, but also, instead of being more or less rectangular, it was elliptical in shape, indeed almost circular, since it measured 12 ft. from east to west and 10½ ft. from north to south and all its corners were well rounded. The floor of the house seemed in parts, especially towards the eastern end, to have had a layer of clay placed above the gravel. This clay formed originally a hard dry covering, though in the long time which had elapsed since the filling of the hole, the percolation of moisture through the filling had reduced it to its original sticky consistency.

The deviation of the position of the post-holes from the line of the main axis of the house-bottom which was observed in house VI also held good in the present instance. At the western end the post-hole lay some 3 ft.

south of the main axis, while at the eastern end the corresponding hole was $3\frac{1}{2}$ ft. north of the same line. The holes were 22 in. and 21 in. deep respectively. Both were a foot in diameter.

In what may be termed for convenience the south-eastern corner of the house was a semicircular bay in the face of the gravel, $2\frac{1}{2}$ ft. in diameter. This semicircular wall had been continued from the more northerly point of the arc by a line of stones, terminating in a large one situated exactly opposite the southerly extremity of the arc, thus leaving an opening, about $1\frac{1}{4}$ ft. wide, facing westwards.

In the western half of the house a line of stones and pieces of Roman tile were found disposed in an almost crescentic line at a height of $1\frac{1}{2}$ ft. from the lowest level of the house-bottom. The horns of the crescent, which lay $5\frac{1}{2}$ ft. apart, faced the western end of the house. At the northern end of the arc was a large block of limestone, 1 ft. long and 9 in. wide, and at the southern end a smaller irregular piece of the same material, while between them were successively pieces of limestone and portions of Roman tiles, one a portion of a ridge-tile.

From no other house has so large a quantity of broken sherds been recovered. These and equally numerous pieces of broken bones were found at all depths. The pottery was, with the exception of some half-dozen pieces, all Saxon. The exceptions comprised two small fragments of Samian ware, part of the rim of a light-red mortarium, pieces of light-grey Roman wares, and the base of a vase of the same fabric. In addition several fragments of Roman bricks or tiles were found in the filling. The most interesting of the pottery discovered were several sherds of a decorated Saxon vase, all found quite close to the floor of the pit. Out of these it has been possible to reconstruct about one-third of a vase of squat form, with a wide mouth, short concave neck, and depressed body which is joined to the neck by a well-marked carination. Round the neck is a succession of circular stamps with a central cross between a pair of incised lines above and below. On the carination is a row of lightly incised zigzags, while the body of the vase is decorated with pendent isosceles triangles, their long sides bounded by a pair of incised lines and their middles filled with circular stamps of the same pattern as those impressed on the neck.

The intimate connexion of these three rooms was shown by the discovery of fragments, much abraded, of what must have been a vase richly decorated with bosses and stamped patterns, in all three rooms, the largest quantity coming from the lowest levels in room III. The greater quantity of sherds and broken bones found in room III as compared with the other rooms seems to indicate room III as the kitchen first of room II, and subsequently of rooms I

and II, which were the living-rooms of a house of greater pretensions than any others so far discovered.

The great quantity of pottery recovered from this house and the crescentic line of stones and tiles at so great a height from the floor (for the material on which they rested was similar to the filling of the rest of the house), added to the unusual depth of the house, tends to confirm in the strongest possible manner the suspicion which has presented itself to our minds on more than one occasion that the filling of these pits is in many cases the result of long-continued occupation, during which the level of the floor must have gradually risen, in this instance 6 in. to a foot at least above the original bottom. Otherwise the purpose of the crescentic line of stones, which resembles some of the hearths found in other houses, resting as it does on material in no way distinguishable from other portions of the filling, would be totally unintelligible.

This leads us back again to the circular arrangement in the south-eastern part of the house. This proved to be an undoubted cooking-hole. From about a foot from the surface of the field it was filled for a depth of $1\frac{1}{2}$ ft. with compact reddish earth, similar to that which is found in most of the small round pits lying outside the houses. This material is conceivably the result of the disintegration of a clay lining which was burnt red by long-protracted use. The bottom of the hole was occupied by a shallow cup-like depression which was filled to a depth of 6 in. or more by a solid mass of charcoal, out of which were recovered, in addition to some eighty flint flakes, all with a bluish patina, and two large and one smaller flint cores, a flattish piece of bone, $2\frac{3}{4}$ in. long, sharpened to a point at one end, a minute fragment of red-baked ware with quartz grains, and another, very much worn, of soft black paste with a greyish surface. This latter, though difficult to class with certainty, would seem to be a Bronze Age fabric to judge from the slight evidence of the form. A small sherd of Saxon pottery was found in the hole itself and a larger sherd just at the front edge. It seems clear, from the presence of other circular holes close by, that the Saxons in excavating to build this room penetrated into a Bronze Age pit and included the half of its circumference in the periphery of the room, but without troubling to clear out the bottom of the hole to the level of the gravel, thus leaving the accumulated charcoal of the Bronze Age occupation in the bottom.

House XI.

This house lay some 35 yds. south of the main line and 15 yds. south of house X, and measured about $10\frac{1}{2}$ ft. in length by 9 ft. in width, with a post-hole at the middle of each short side. Large stones lay on the floor, about $1\frac{1}{2}$ ft. deep, at about $1\frac{1}{2}$ ft. from the northern side in the north-west corner, and again some

2½ ft. from the north-eastern corner, with conglomerations of smaller stones between or close to the larger ones.

Among miscellaneous sherds were three decorated fragments, all with an incised circle enclosing the stamped design, or in one case a group of stamps. A flattish piece of dried, but unbaked, clay seems to bear traces of the impress of wooden stamps, such as were used on the vases themselves (pl. xxiv, fig. 2, E and F).

There were also two bases of Roman vases and two portions of baked clay rings.

Other objects found were a perforated bone pin, 3 in. long; a narrow iron tanged knife, 4½ in. long, with straight back (pl. xxvii, fig. 1, E¹); a narrow strip of iron, nearly 4½ in. long, with one end curled over into a loop (a hasp?) (pl. xxvii, fig. 2, E); part of an iron pin (? of a brooch), a short nail, and an iron comb. A long flint scraper of mottled brown flint, with white patination on one face of its high keeled back and with steeply chipped cutting-edge; another with white patina roughly chipped from a discoidal flake, with somewhat serrated edge (pl. xxix, fig. 2, bottom row, nos. 1 and 2), and other flakes complete the finds.

THE SILVER BROOCH AND THE DATE OF THE VILLAGE.

The brooch (fig. 11) is of base silver, cast, chased, and gilt; it measures 3½ in. in length and 1¼ in. width. On the back of the larger arm are two perforated lugs through which passes the iron rod on which the iron spring-coil works. This coil, which is in one piece with the pin and passes in a loop below it, appears to be reinforced at either end of the coil by a coil of bronze. Both arms of the brooch have similar decoration. Along the outer edge runs a border derived from the Roman egg-and-tongue pattern; the middle of the arms constitutes a panel filled with two S-shaped acanthus scrolls placed end to end, and with little tendrils filling the spaces in the curves of the scrolls and the outer corners of the panel.

On the inner edges of each arm are crouching animals with their heads at the outermost point of the arms. The larger arm has in addition an animal placed in the angle of the junction of the arm and the bow. In this case the animal lies facing the bow, but the head is turned backward and executed *à jour*, with an ear joining the bow and its tongue protruding so as to meet its rump.

The bow, which shows marked signs of wear, particularly on its most prominent part, has borders of the same style as the arms. Within these is a pair

¹ The Roman numeral VIII in white on this and pl. xxvii, fig. 2, E, represents an initial numeration of the house subsequently altered.

of stylistically treated acanthus scrolls of the enclosed type with their upper spiral ends meeting at the middle of the bow. In point of technical and stylistic execution of the ornament this brooch is as fine as, if not finer than, any other example of its class found either in this country or in the province of Hanover, where these brooches were manufactured, and whence they came to this country. Only one other example, that from Little Wilbraham, Cambridgeshire (to judge from the rather unsatisfactory drawing in Neville, *Saxon Obsequies*, pl. ii), is decorated with a similar border along the outer edges of the arms.

In other respects the nearest parallel to the Sutton Courtenay brooch is that from Anderlingen,¹ which has this same border along the edges of the bow, but is furnished with a thick ribbed edge on the arms. In this brooch the treatment of the scrolls and the disposition of the animals is almost identical with the newly-found brooch, but the leaflets of the 'fill-up' tendrils and other little details show a slight inferiority.

The acanthus motives on the bow also fall far short of those on the Berkshire brooch and are manifestly due to the gradually decreasing comprehension of the meaning of the motives employed, a fact particularly well brought out by comparison of a brooch of this class from Quelhorn, Hanover,² which is in the main nothing more than an unintelligent reproduction of a brooch like the Sutton Courtenay specimen.

The date of these brooches has been fixed by Salin about A.D. 400,³ but Plettke, who had more examples at his disposal for comparative study, evidently inclined to a somewhat later date for some of the specimens. Still he does not go beyond the first half of the fifth century, and since the Sutton Courtenay brooch is far from being a late example, it follows that the deposition of the brooch behind the post of room II in house X can hardly have taken place at the outside later than the latter half of the century. Moreover, from what we know of Anglo-Saxon burial customs the objects buried with the dead are indicative of the gradual change of fashion, and thus a brooch of the equal-armed class, if deposited in a grave, would point to one among the earliest Saxon burials in this country, that is to say, before the close of the fifth century.

Yet another point of interest bearing on the date of the settlement comes out from the discoveries in this house. In the description of room I it was noted that the lower part of the wall in the north-east corner of the room presented a well-preserved right angle, and that above this angle the wall had been

¹ E. T. Leeds, *The Archaeology of the Anglo-Saxon Settlements*, fig. 17.

² A. Plettke, *Ursprung und Ausbreitung der Angeln und Sachsen (Die Urnenfriedhöfe in Niedersachsen)*, Bd. III, Heft I, pl. 9, fig. 3.

³ *Månadsblad* (1894), p. 35.

cut through to give access to room II. Beyond the doorway the gravel floor sloped rapidly down from the level of the doorway to the middle of room II.

Had these two rooms been constructed at the same time, this doorway at 9 in. above the floor of the rooms would have no meaning and, as we proved from practical experience in constantly passing from one room to another, the clean right angle at the corner would very soon have been trodden away.

It follows that room II was constructed after the burial of the man in room I and the subsequent filling up of the room to a level 9 in. above the original floor. Thus the burial took place before the deposition of the brooch.

The cremation interments in Anglo-Saxon cemeteries are usually considered to be among the earliest, thus agreeing with the large urn-fields of the Migration period in North Germany, but it is a criterion which is not universally applicable, since a few inhumation burials are even known in North Germany. The find at Sutton Courtenay proves clearly that the change from cremation to inhumation was in progress at the time when the Saxons were planting their first settlements in this country. It may be remarked here that the Little Wilbraham brooch was found in the grave of a man, and it is certain that the other English examples, namely those from Haslingfield and Kempston, must also have been found with inhumation burials.

The discovery of one of these brooches in Berkshire bears out in a striking manner the contention which I have advanced elsewhere that the settlers in Cambridgeshire were in part at least of the same stock as the West Saxons, and therefore that both came originally from the modern province of Hanover, and to judge from the German evidence, from the northern part of the province between the Elbe and the Weser.¹

Finally, the discovery of this brooch coupled with such facts as the burials of Saxons almost side by side with Roman graves in the cemetery at Frilford, proving that the position of the Roman grave-place was still well known at the time of the Saxon occupation, points to an extensive settlement of the Thames valley in the Oxford district by the latter half of the fifth century.

POTTERY.

Form. By far the largest quantity of pottery from these excavations consisted of sherds, of which several could here and there be allotted to the

¹ *Op. cit.*, pp. 81 and 91. It becomes a question whether after all the first inroad into the upper Thames valley was not effected by an advance from the Ouse across the watershed, and whether the battle of Bedcanford did not in reality take place some hundred years earlier than the date given by the chroniclers, who, confusing it with some other battle, wrongly connected it with Cuthwulf's activities towards the close of the sixth century.



Fig. 1. Saxon vases ($\frac{1}{2}$)



Fig. 2. Bronze Age pottery (*c.* $\frac{1}{3}$)



Fig. 1. House VI, looking W.



Fig. 2. House VII, looking E.

same vase on grounds of texture, form, and colour, without, however, any possibility of piecing them together. In the main they appear to have belonged to two classes. First, vases with globose bodies, sometimes spheroidal, sometimes more squat in shape with the shoulder rather flattened. The large cooking-pot from house VII is a good example of the first; the portion of the large vase from house II of the second. To vases of this class belong a large series of fragments showing an out-turned rim succeeded by a constriction of varying depth, which is all these vases possess by way of a neck.

Secondly, vases with their walls either slightly bulging at the middle or almost perpendicular, but invariably with no neck, leaving a mouth almost as wide as the widest diameter of the belly. Such is the second large vase from house VII, and on a smaller scale the little vase found at the top of pit E. Examination of the large quantity of rims discovered proves that this type of vase was by no means uncommon. Their rims are distinguishable from those of the first class in being approximately of the same thickness as the rest of the vase, whilst those of the first class in section are inclined to be bulbous.

In addition to these main types there are remains of a variety of other forms. Several fragments from house IV belong to a small, thin, shallow bowl with rather rounded base, low vertical walls, and out-turned rim; another bowl seems to have had its wall curving inwards to the mouth.

But amongst the most interesting vases evidenced by the sherds are several of quite small dimensions, such as never appear in graves. One of these (pl. xxii, fig. 1, B) from house I it has been possible to restore. It has an out-turned rim, a short neck, ovoid body, and a flat base, and on the side of the body are two (possibly originally three) vertical excrescences. It measures $2\frac{3}{4}$ in. in height and $2\frac{1}{4}$ in. in diameter. But its most interesting feature is that it is made of a light-grey clay to which no parallel is afforded by any other sherd from this site.

Other tiny vases of unburnished brown ware seem to have belonged to the second class, but are furnished like the last-mentioned vase with vertical excrescences, but perforated transversely with minute holes. This type is represented by two or more fragments from house IV and a single fragment from house I (pl. xxiv, fig. 2, A and B).

The bases of the pottery are as a general rule flat, but two bases are hollow underneath; the one almost pedestalled in form, the other more in the nature of a ring-foot belonged to a small cup, in form and size like a modern egg-cup (pl. xxvi, fig. 1, J and K). Some fragments of a small vase perforated to form a strainer came from house IV (pl. xxiv, fig. 2, C).

Texture. The term Saxon pottery connotes hand-made wares of badly-fired clay, often with elongated pittings in the surface produced by the burning

out of the straw or other material incorporated in the paste. The fracture is usually brown and the paste soft.

In colour, Professor Baldwin Brown (*Arts in Early England*, iv, 489) notes, 'they (the vases) vary within somewhat narrow limits. The general hue is a brownish grey that may be described as "mud-coloured", but this runs sometimes in the direction of red and at other times in that of black, while the tone ascends here and there to a lightish buff'. Perhaps the dominant colour of the pottery so far known from the Oxford district is a chocolate-brown.

The new discoveries reveal a somewhat wider range, both in texture and colour, than that pictured in the foregoing remarks, especially in the matter of texture.

(1) A greasy black paste, without any bonding material, exceedingly soft and friable. In the second large vase in house VII only a very thin layer inside and out shows any degree of hardness. It is indeed difficult to understand how a vase of this texture could have withstood any use whatever. So soft was it that it went out of shape before firing.

(2) A soft brown paste compounded with chopped straw or grass. On firing it turns a reddish or dark brown on the outside, and, as is shown by fractured sherds, the chopped straw is burnt out on the surface, leaving lenticular pittings, while in the thickness of the walls it is carbonized. This class of ware was employed for making what must have been the largest vases, such as the huge vase in house VII and pieces of other vases of great thickness recovered from several of the houses.

(3) The largest proportion of the pottery answers to Professor Baldwin Brown's description in the matter of colour and is made of a medium soft brown paste.

(4) Some thick sherds which belong to large vases are of a hard gritty black ware (as seen in the fracture) which takes a good smooth surface, sometimes with minute pittings, or, if unlevigated, shows a rough surface.

(5) A softish black micaceous ware capable of taking a fair burnish.

(6) A ware, smoke-grey in the fracture, sometimes very hard.

(7) The hardest ware found is that of which the part of a crucible found in house IV is composed (pl. xxvi, fig. 1, F). It is of a dirty greenish-buff colour throughout, and the surface exhibits minute cracks as witness to the high temperature to which it has been subjected.

Occasionally sherds have been found which are extremely hard, buff in colour throughout their thickness, and with a fine lustrous burnish. The discovery in house VI of such sherds (pl. xxiv, fig. 2, D) of decorated pottery, harder in texture than any other found previously with the exception of the crucible, at first induced the belief that the Saxons were in the habit of making a better



Fig. 1. Cooking-pot from House VII (c. 1)

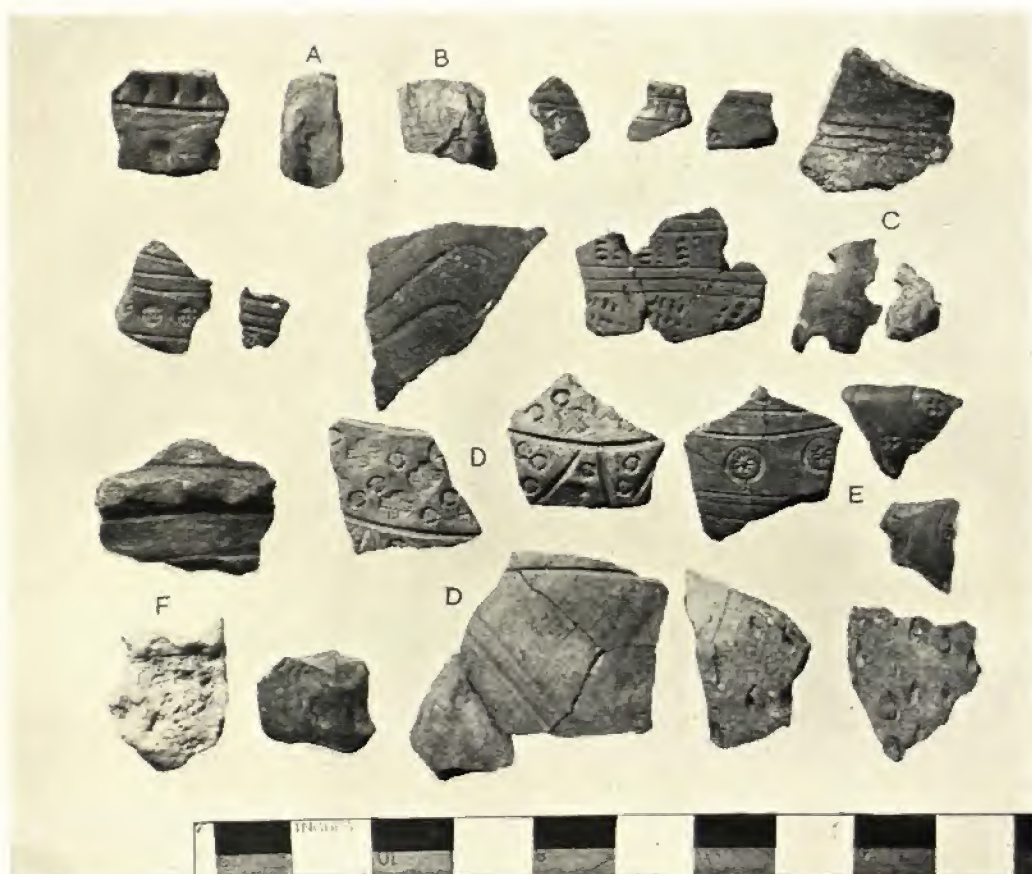


Fig. 2. Examples of Saxon decorated wares, Sutton Courtenay



Fig. 1. Pits, west of House VII. View eastwards across hearth in Pit 2 to Pit 3



Fig. 2. House X. View of north-eastern portion of Room I

class of pottery than was suggested by anything found in their graves. The occurrence of sherds of this class was, however, explained by the discovery in the third room of house X of a large portion of the small squat carinated vase, decorated with linear incisions and circular stamps with a cruciform design. In the same room a sherd exactly comparable to those from house VI came to light. This on closer examination proved to belong to the imperfect vase, although it could not actually be fitted to it. The main portion of the vase was of the ordinary class of Saxon pottery, so that the alteration in the texture and colour of the separate sherd can only be the result of subsequent contact with fire, probably in the hearth. It demonstrates at least that the Saxon pottery was capable of being fired to a greater degree of hardness and to a light-buff colour, but that the Saxons were ignorant of the methods by which such a result could be obtained.

The quantity of decorated pottery recovered is inconsiderable and consists, apart from the vase mentioned above, almost entirely of quite small fragments. The decoration is carried out in incised lines or by means of stamps of various patterns, such as are well known from the pottery found in graves. But even these insignificant fragments of decorated wares exhibit the same variety of texture and finish as the plain wares.

In addition to these undoubted Saxon fabrics, specimens of rather gritty grey ware burnt to a brick-red colour on the outside have come to light. But that these are Saxon is more than doubtful. They are probably to be classed with the occasional fragments of Roman pottery that from time to time have appeared amongst the sherds recovered from these houses. These Roman sherds include pieces of red mortaria, Samian and imitation Samian wares, unburnished gritty grey and other miscellaneous fabrics. Several bottoms of Roman vases pared down to form pot-lids(?) have been found either in proximity to or even incorporated in the walls of hearths. Roman also must be the very numerous fragments of bricks or tiles. Most of these are plain, but a few ornamented pieces have been found. A fragment from house I* (pl. xxvi, fig. 1, L) is decorated with incised lines; another larger piece from house IV (pl. xxvi, fig. 2) has been impressed with a wooden stamp, and with it is illustrated a smaller fragment, decorated in exactly the same way, from the site of a Roman house at Worsham Bottom, on the River Windrush, near Witney, by kind permission of Dr. A. E. Peake, the finder.¹

It will be clear from the above account that the Saxons, though ignorant of the wheel, are entitled to receive credit for making better pottery than perhaps

¹ A tile similarly ornamented is illustrated by C. Roach Smith in his *Catalogue of the Museum of London Antiquities*, p. 56.

has hitherto been suspected. At the same time these new discoveries seem to indicate that much of the hand-made ware commonly labelled Romano-British (or even Late Celtic) should be treated with greater caution than has been the case in the past, especially in localities where Anglo-Saxon finds in any quantity have been made.¹

CLAY RINGS (pl. xxvi, fig. 3).

As already stated, four of these baked clay rings have been found on this site besides very numerous fragments. They are of very rough manufacture: a roll of clay, often with pebbles incorporated in the paste; sometimes round, often almost square, in section, or flattened on one face from being pressed on the ground in the making. Many of them are impressed with finger-tip pittings at intervals. The central aperture is as frequently nearly rectangular as circular, or instead of the inner face of the aperture being round, like the outer face of the ring, in some it is slightly concave as the result of a variation in their manufacture. Their dimensions vary from 4 in. to 5 in. in diameter and from 1 in. to 1½ in. in thickness.

Several suggestions have been made as to their purpose.

(1) Net-sinkers. No! Because numerous fragments have been found in the Sutton Courtenay houses.

(2) Pot-rings. Not in the sense of stands for round-bottomed pots like those known from ancient Egypt, because the vases of Anglo-Saxon times have invariably a flat base, but rather for raising cooking-pots in the hearth to allow the fire full play on their lower part. Some such use would account for the patches of uneven firing that many of them present and also for the flaked surface which is to be seen on otherwise complete examples.

(3) Loom-weights. Some specimens would be quite unsuited for supporting a pot and, though owing to their hardness the threads of the warp, if fastened to such rings, would leave but little mark on them, in a few cases what appear to be shallow cuts on the side of the hole may be the result of suspension. In one irregularly shaped specimen when suspended a thin string fits naturally into a nick at one point on the face of the hole.

(4) Pot-boilers. The signs of constant contact with heat would apply here also, but stones reddened by fire, some of them of quite large size, like those usually regarded as pot-boilers, are of frequent occurrence in these houses.

¹ Through the kind offices of Dr. Cyril Fox, F.S.A., Local Secretary for Cambridgeshire, I have been enabled to inspect a large quantity of sherds from sites near Cambridge, now in the Museum of Archaeology and Ethnology there. Many of these sherds are unmistakably of Late Celtic fabrics, but others, in the light of the experience gained at Sutton Courtenay, I should hesitate long before pronouncing to be Late Celtic rather than Anglo-Saxon.



Fig. 1. Miscellaneous objects of pottery, stone, &c., Sutton Courtenay ($\frac{1}{3}$)



Fig. 2. Stamped Roman tiles, near Burford, Oxon., and Sutton Courtenay, Berks. ($\frac{1}{2}$)



Fig. 3. Pottery rings from Sutton Courtenay (top row) and other sites near Oxford (lower row) ($\frac{1}{3}$)

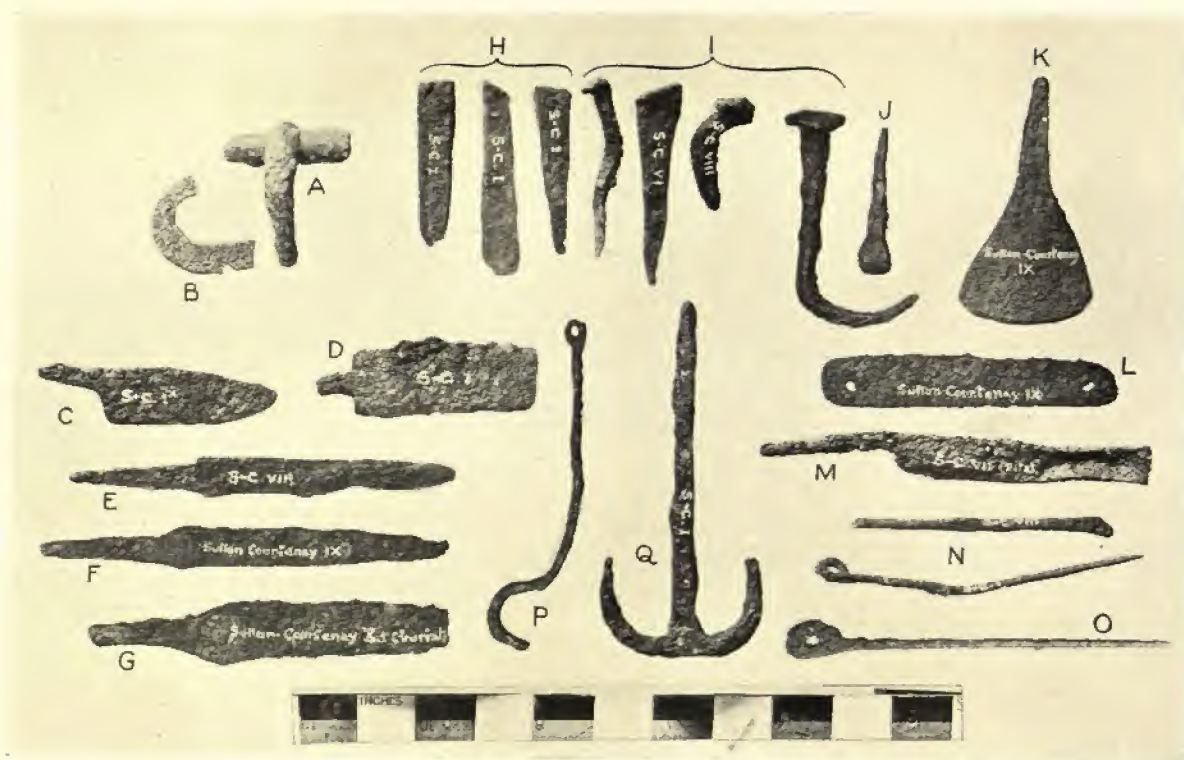


Fig. 1. Bronze ornaments and iron implements, Sutton Courtenay ($\frac{1}{3}$)



Fig. 2. Iron miscellanea, Sutton Courtenay ($c. \frac{1}{2}$)

The truth is that they may have served a variety of purposes, though the balance of favour is in favour of their having been used as pot-rings and loom-weights. Such rings have been found in many other sites in Oxfordshire and Berkshire. Three, one of which is labelled 'Field near Milton Stream, Sutton Courtenay, Berks. (in drift), 1897' (Pitt-Rivers Museum), the other two 'Sutton Courtenay Field' (British Museum, 1862, 3rd December, nos. 4 and 5), must have come from the vicinity of the present discoveries. Five others (Ashmolean Museum) were discovered in 1876 in making the large reservoir at the top of Headington Hill, Oxford; another, one of four (P. Manning collection, Ashmolean Museum), was found in a field near the church at Lower Heyford, Oxon.; yet another somewhat smaller and more carefully made, bears a label 'Yarnton' (Oxon.) in the handwriting of Professor Rolleston, probably about 1876. A fragmentary specimen in the Manning collections is labelled 'Bunker's Hill, Shipton-on-Cherwell'. Quite recently three complete examples from Middle Aston, North Oxon., have been presented to the Ashmolean Museum by the Rev. C. C. Brookes.¹

Outside these two counties attention may be drawn to similar rings found at Desborough, Northants, and illustrated in *Proceedings*, xxii, 335, fig. 2, with references given to other examples. No date is there assigned to them, although for some reason which I have been unable to discover such rings have in the past generally been regarded as belonging to the Late Celtic period. The present evidence shows that such an ascription is wrong.

No details of discovery exist in the majority of cases, but both at Lower Heyford (*B. A. A.*, ii, 89, wrongly called Lower Heywood) and at Yarnton (G. Rolleston, *Scientific Papers and Addresses*, ii, 942 ff.) Saxon interments have in the past come to light, and at Desborough in addition to remains of earlier periods numerous Anglo-Saxon relics have been recovered. Nothing like this form of ring is known from any purely Late Celtic site, and they must certainly now be allotted to the Anglo-Saxon period.

IRON (pl. xxvii, figs. 1 and 2).

Apart from two bells of a type such as even to this day are suspended from the necks of cattle, sheep, or goats to frighten away marauding beasts and also to facilitate discovery in the case of straying flocks, the iron objects from this site comprise knives such as are commonly found in Anglo-Saxon graves all over the country. One knife has been modified so as to serve as a small gouge

¹ One of these is $5\frac{1}{2}$ in. in diameter, is much flatter than the normal type, and has a hole only $1\frac{1}{2}$ in. wide.

by cutting the point to a square edge, and by hammering up the original cutting-edge of the knife and beating hollow the lower end of the blade (pl. xxvii, fig. 1, M).

Of several nails (pl. xxvii, fig. 1, H and I) some are not unlike modern horse-nails and may have been intended for that purpose, but, while some have a sharp point, one example has a wide wedge-shaped end. All, however, seem to have had their head finished off with a slanting face at the thick end.

A portion of a circular hoop made of a flat piece of iron beaten over into a half ellipse is probably part of the rim of a large bucket or the like (pl. xxvii, fig. 2, F).

Iron pins of brooches, $3\frac{3}{4}$ and $4\frac{5}{8}$ in. long (pl. xxvii, fig. 1, N and O), and so evidently of a large type, have also been found; but unfortunately not the brooches to which they belonged.

The iron comb (pl. xxvii, fig. 2, C) from house XI, originally some $4\frac{1}{2}$ in. wide along the teeth, diminishes rapidly in a sweeping curve towards the back of the comb, where the width was a bare $2\frac{1}{2}$ in. It measures $2\frac{3}{8}$ in. in depth from the teeth to the back, and has two largish rivet-holes set half an inch apart in the centre of what may be termed the tang. The teeth vary in length from $\frac{1}{8}$ in. or less at the outer edges to nearly $\frac{3}{4}$ in. at the middle, so that the tang is never less than $1\frac{1}{2}$ in. From this fact and the size of the rivet-holes, it was evidently affixed to a long stout handle and served as a flax-heckle or comb for some similar purpose.¹

Among the discoveries in several houses are lumps of iron-slag or scoriae (pl. xxvi, fig. 1, E). In some houses only a few small fragments occurred, but in others, notably houses IV and VII, quite considerable quantities were recovered. The two largest lumps came from houses IV and VI, but all round the very large pot from house VII were strewn large pieces, of which one was found actually adhering to the rim of the pot.

These larger lumps are rough and vesicular, evidently containing a large proportion of foreign matter, but smaller lumps, most of them discovered in houses IV and I, are of a brownish-black dense lustrous material, which Dr. H. L. Bowman, Waynflete Professor of Mineralogy, informs me is probably an iron-slag, since it contains no other heavy metals. He further agrees that they may well be the remains of furnace-products.

IMPLEMENTS OF BONE, ETC. (pl. xxviii, figs. 1 and 2, and pl. xxix, fig. 1).

The combs and spindle-whorl explain themselves, but the exact purpose of the perforated pin and of the double-pointed stiletto-like implements is not so easy to understand. The former, it may be suggested, served as a primitive

¹ An iron comb from Norway to which is assigned the same use is figured by G. Gustafson, *Norges Oldtid*, fig. 472.



Fig. 1. Bone combs, spindlewhorls, &c., Sutton Courtenay (c. 12)

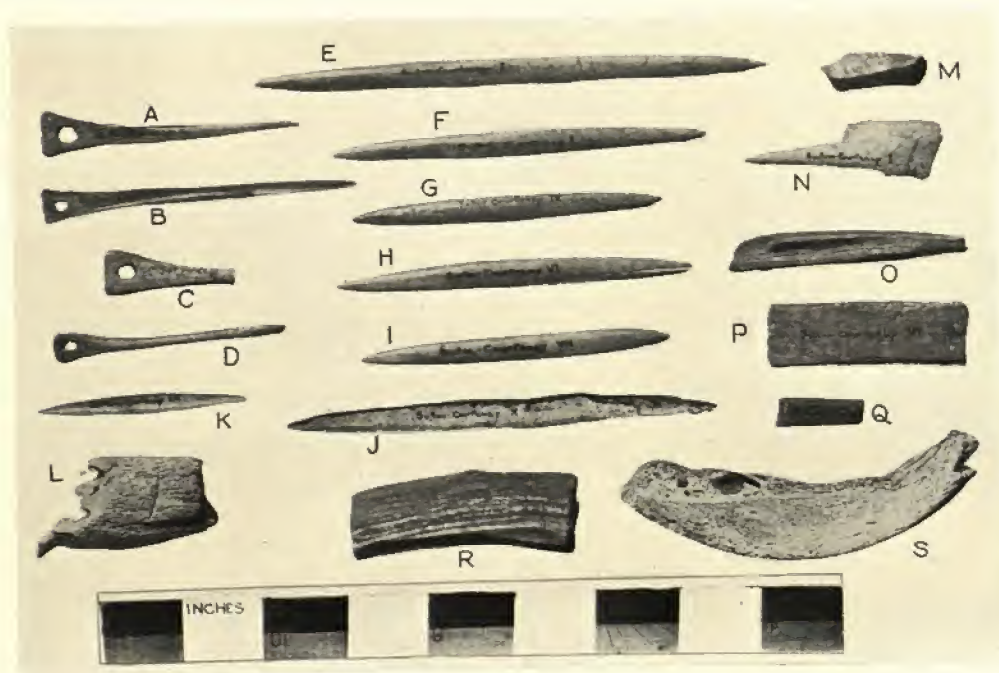


Fig. 2. Bone pins, &c., and pieces of cut bone and antler, Sutton Courtenay (c. 12)



Fig. 1. Bone pins, &c., from various sites in Oxfordshire (*c.* $\frac{1}{2}$)



Fig. 2. Flint implements, Sutton Courtenay (*c.* $\frac{1}{2}$)

brooch, a cord or thong with one end knotted being passed through the perforation and, after the pin itself had been thrust through the two folds of material which it was desired to fasten together, twisted round the pointed end of the pin in a single or double hitch.

The difficulty in regard to the stiletto-like pins is the wide variation in length and thickness of the examples which have come under my notice. Those found in the present excavations vary in length from $6\frac{1}{4}$ in. to $2\frac{5}{8}$ in., but are all of about the same thickness at their middle. In the Ashmolean collections are several other examples, found at Eynsham, Yelford, Wolvercote, and Yarnton. These with specimens of perforated pins, a comb, and spindle-whorls from the same localities and similar to those found at Sutton Courtenay are illustrated in pl. xxix, fig. 1. As will be seen by reference to the figure, they vary considerably not only in length but also in thickness. Of the examples comparable in thickness with the newly found specimens, those from Eynsham measure $4\frac{1}{4}$, $3\frac{3}{4}$, and $4\frac{1}{2}$ in. respectively; that from Yelford $3\frac{1}{4}$ in.; from Wolvercote $3\frac{1}{2}$ in.; from Standlake $2\frac{3}{4}$ in., while that from Yarnton measures no less than $6\frac{1}{4}$ in. and is $\frac{9}{16}$ in. thick at the middle. This last example, as also that from Yelford, is not round in section like the rest but flattish on two faces giving a quasi-oval section.

It cannot be denied that the very short examples may have been no more than piercers or stilettos, and the same could apply to those of medium length and even to the longest slender specimens. But it is difficult to believe that the large example from Yarnton was made solely for such a purpose.

In view of the presence of numerous signs of loom-weights and of spindle-whorls of bone from houses IV and IX, and that of baked clay from the pits on the eastern face of the gravel-pit, it is strange that no traces of anything which could have served as a shuttle should have been found, and I offer the suggestion that some of these double-ended bone pins are nothing else than shuttles. The thread, if wound sufficiently tight in figure-of-eight wise round the pin, could, especially in the case of the Yarnton example, have been passed across the warp perhaps more easily than the perforated metacarpal and metatarsal bones found in the Glastonbury lake-village (A. Bulleid and H. St. George Gray, *The Glastonbury Lake-Village*, ii, 427, fig. 152), for which a similar purpose has been suggested. The slenderer pins would be specially suitable for fine weaving. They might also have served for net-making. The suggestion that they were hairpins has also been made, but this explanation will not serve for the shortest pins. The truth may well be that they served for a variety of purposes, according to their length and thickness.

For the mysterious lunate bone implement 6 in. long and $1\frac{3}{4}$ in. wide made from an ox(?) jaw (pl. xxviii, fig. 1, F), from house II (called on that account

the 'butter-pat' house), the explanation seems to be that it and the pair to it (if it actually existed) were employed for dressing skins, working up clay for pottery-making, or the like. Somewhat similar, though of more elaborate form, is the so-called 'Kjøtkniv' of Norwegian archaeology, of which an example found in a grave at Store-Dal, Skjeberg, is figured on pl. xx, fig. 5 of *Gravplassen fra Store-Dal i Skjeberg*, by Jan Petersen (*Norske Oldfund: Avhandlinger utgit af Universitetets Oldsaksamling*, ved A. W. Brøgger; Kristiania, 1916).

This knife, which has a triangular blade with a cutting-edge 15 cm. long and is furnished with a long slender handle springing from the apex of the triangular blade, is surmised to have formed part of the women's gear and to have served for cleaning skins, as the title 'Kjøtkniv', i.e. meat-knife, would seem to imply, or for smoothing cloth.¹

FLINT (pl. xxix, fig. 2).

Flint, chiefly in the form of flakes, abounds everywhere on this site, and in addition to the implements and flakes found in the Bronze Age pits has occurred in every Saxon house so far excavated.

In the unpatinated specimens it is of varying colour, black, brown, or grey, the last often mottled. The patinated flints show every shade from pure white, through grey, mottled blue and white, to light blue; sometimes a patch or patches of bluish patination occur on an otherwise unpatinated flint.

No distinction can be drawn in regard to the depth at which the different colours of patination are found. Thus pure white patinated flints have been picked up on the surface of the field, while a large flake of the same colour came from the very bottom of pit L. Again, whilst in one of the pits near house X the flints consisted of numerous flakes as well as of two fine scrapers of grey patinated flint (pl. xxix, fig. 2, bottom row, 3 and 4), from the other only 3 ft. away the flints all bear a mottled blue and white patination. These distinctions of colour and patination are present in the finished implements as in the flakes. The majority of these implements are scrapers, which in some cases exhibit signs of wear and use, while others are in a perfectly fresh condition. One, of brown flint, has the original chalky crust on its back. Most are of the almost circular form, but Dr. Cunningham retrieved from the surface of the field a long narrow form with white patination. Another measuring $2\frac{1}{2}$ in. by $1\frac{1}{2}$ in., with keeled back and steep secondary chipping, might, if found under suitable conditions, easily pass for a typical Aurignacian example.

Nevertheless, it is likely that the majority of the flints date back to the

¹ G. Gustafson, *Norges Oldtid*, p. 107, fig. 478, from Østraat, Ørlandet, S. Trondhjem.

Bronze Age occupation of the site, and that of those found in the Saxon houses some must have fallen in along with the material with which the house-bottoms were ultimately filled up, while others were collected by the Saxons themselves for striking fire. On a site on which flint is so easily found it may be doubted if they would have taken the trouble to chip flint themselves for that purpose.

In view of the lack of any prior knowledge of the Saxon house in this country outside of literature it is only natural to turn to the Continent in the hope of finding parallels.

Stephani, basing his account of the Frankish house on the information derived from the *Lex Salica*, concludes that it stood immediately on the surface of the ground without a basement and with no planked floor, and that it was quadrangular in form. It could be easily destroyed by fire, being constructed of wood and wattle, and was a flimsy structure, since, if a corner-post were pulled away, the roof was liable to collapse.¹

He notes the almost entire silence about the dwellings of the poorer classes both in the laws of the Franks and other continental tribes, and also in Anglo-Saxon literature. The class of house to which those at Sutton Courtenay belong seems to be designated by the term 'cotan' (*Laws of Knut*, l. ii, c. 76 b) and 'cyte' of Psalm 78, v. 20, and for this name it is unnecessary to go further than the charter of Milton, the Berkshire parish which in part marches with Sutton Courtenay on the south. One of the boundaries in the Milton charter reads, 'to smalan wege on lacing and syx cotsetlan'.²

Stephani remarks that there can be no doubt that the houses in England answered to the homeland type, but that, where reminiscences of Roman architecture are observable, it is always a question of roads, defensive works, or buildings of a special nature (*Luxusbauten*), never of dwelling-houses. He adds, 'Der Angelsachse wohnte genau so, wie er auf deutscher Erde gewohnt hatte'.

A house, regarded as typical of the German house of the early Iron Age, was uncovered at the Römerschanze near Potsdam.³ It measured 11 metres by 6½ metres over all, and was composed of a single room 8 metres long, with the door at one end in front of which was a porch. The walls were constructed with posts at short intervals all round, supplemented by wattle and daub. The room had a central hearth. A pit in the middle of the floor filled with remains of Slav occupation shows that the house was in existence at the time of the Slav advance westwards. The contrast of this type of house to those found at

¹ K. G. Stephani, *Der älteste deutsche Wohnbau*, i, 260 and 389-90.

² J. A. Stevenson, *Historia Monasterii de Abingdon* (Rolls Series), i, 214. Compare Kemble, *Codex Diplomaticus*, iii, 35: 'ofer ðaem forða ollunc straete ðaet onbutan ða cotu'.

³ *Præhistorische Zeitschrift*, i, 230 ff.

Sutton Courtenay is heightened by the absence of a subterranean floor, and it appears that such half-subterranean houses are not known in Germany prior to Carolingian times, although Tacitus' well-known passage is quoted as proof of their existence.

In the ditch behind the rampart of the Römerschanze, however, a Slav house was discovered. It measured 4.6 metres by 3.5 metres and had a single post at each gable end. Also, as appears clearly in a figure giving the section of the rampart and the ditch at this point,¹ the floor of the house was excavated in the bottom of the ditch, and if, as German writers hold, the Slavs did not destroy, but rather preserved, the German methods of housebuilding,² it may be that this Slav house represents a type of cottage in vogue in North Germany at the beginning of the Migration period.

To the Carolingian period belong houses with their floors sunk into the ground on the Heisterburg near Nenndorf, on the Wittekindsburg near Rulle, and on the Dolberg on the Lippe. One on the Heisterburg measured no less than 10 metres in length. No mention is made of post-holes. These German examples seem to indicate a method of house-construction surviving from the Migration period in North Germany and akin to that employed at Sutton Courtenay.

The absence of any wattle and daub at Sutton Courtenay suggests a different method of construction from that of the normal German type. The shallowness of the excavation in the gravel would necessitate some structure around the pit to raise the wall to a suitable height, and it is therefore more than probable that the method adopted was that noted by S. O. Addy in an old cottage at Great Hatfield, E. Yorks.³ The cottage in question measured 28 ft. in length and $15\frac{1}{2}$ ft. in width and was built without crucks. The walls were 1 ft. 7 in. thick and were built up of alternate layers of mud and straw, the straw being placed transversely to the wall in thin layers above each thicker layer of mud. A wall thus constructed would hardly be sufficiently strong at the gable end to carry the weight of a roof-tree as well as the additional roofing-material. A post was therefore erected at each end to support the roof-tree and take the weight off the gable-walls.

Mr. Harold Peake in his recent work on *The English Village* (p. 106) follows Addy in suggesting that the Saxon house of the early period was built with crucks, but, as the present discoveries show, this was certainly not everywhere the case, since at Sutton Courtenay a single post at each end is the general rule. In no instance did we find signs of any other hole which could have been

¹ *Op. cit.*, p. 218, fig. 3

³ S. O. Addy, *The Evolution of the English House*, 38.

² *Ibid.*, p. 235, note 1.

intended for the reception of a post, except in room II of house X, unless it were the hole on the north side of house VI, but, in what relation such a post could have stood to a system of house-building such as is revealed by the single posts at or near the middle of the gable-ends of these houses, I am unable to conjecture.

A general idea of the appearance of the huts at Sutton Courtenay can be gathered from an account of cottages, which are recorded by Mr. Henry Laver as surviving near Athelney, Somerset, in the middle of last century.¹ As is shown by the plan, sections, and reconstructed views of a typical example, these Athelney huts remained remarkably true to the type of the primitive dwellings of Saxon times.

The differences are those of details. At Athelney the posts which supported the roof-tree, instead of being close to the gable-wall of the house, were set some 4 ft. away from the wall. The reason for this was, that, while like the Saxon huts the Athelney cottages were partly underground, in making the excavation for the floor of the house a bank of earth, interrupted only by the hearth at one end and the door in one corner of a long wall close to the hearth, was left round the room for sitting and sleeping. Except perhaps in the hearth-pit of the pits west of house VII, no such arrangement has so far been found at Sutton Courtenay. The Athelney houses measured about 12 ft. in length and 8 ft. in width, and were constructed of wattle and daub, but at Sutton Courtenay no trace of daub has been observed, though unless the daub came in contact with fire, the lapse of time would remove all trace of it. In very dry weather, however, the filling of these house-bottoms often becomes exceedingly dusty and seems to suggest the disintegration of denatured clayey material.

Of the position of the hearth we have as yet not sufficient evidence to state a general rule, and as yet we have little evidence of the position of the door.² Only in houses I and III has any trace of a door been found at all.

Most writers on the subject of ancient houses both in Germany and in this country start from the statement of Tacitus about the Germans of his day as follows, 'solent et subterraneos specus aperire eosque multo insuper fimo onerant, suffugium hiemis et receptaculum frugibus' (*Germania*, 16), and note that the OHG. word 'tunc', glossarized as hypogaeum, gynaeceum, or textrina, implies that these rooms were, as expressly stated by Tacitus, covered with dung for protection against cold. The basic type is considered to have been a half-subterranean construction covered with dung and divided into two parts,

¹ *Proc. Somerset Arch. Soc.*, lv, 175. I am indebted to Mr. O. G. S. Crawford, F.S.A., for drawing my attention to this account.

² Two houses subsequently excavated have a doorway in the south-west corner, thus supporting the conjectured doorway in house III.

the lower being a cup-shaped pit for the storage of corn or other produce, the upper forming the dwelling-house and particularly the women's work-room.¹

There is little probability, however, that at Sutton Courtenay the cottages had more than one storey. The store-pits and additional rooms seem to have been placed, as in houses VII and X, apart from the main room. In this respect the Berkshire cottages answer more closely to the Old Nordic 'dyngja' which had only one room, which was more or less sunk into the ground and served mainly for women's quarters, for which reason it is sometimes called 'vefjarstofa' or 'saumstofa'. We may compare the statement of Pliny about weaving: 'in Germania autem defossi atque sub terra id opus agunt' (*Nat. Hist.* 19, 9).

The Berkshire discoveries seem thus to contradict the statement that the Anglo-Saxons had no equivalent to the 'dyngja'. It is noticeable that, perhaps obsessed by the glossarization of the word 'tunc' and 'dyngja', the writers take little account of the men's quarters, for in a hamlet like Sutton Courtenay the huts must certainly have served as general living-rooms.

It is, however, natural that more evidence of women's presence than that of men should be forthcoming in these huts, but at the same time in some of the Sutton Courtenay houses the traces of woman were more frequent than in others. Thus, while house VI produced only sherds and one bone pin and house VII little besides the two large cooking-pots and two bone pins, the finds in house IV are noteworthy. For apart from the comb and perforated pin, this small house of which only half remained for exploration produced a bone stiletto (or shuttle), a bone whorl, and parts of at least six loom-weights, and the pottery is noticeable by reason of the remains of an unusual number of small pots.* But here the crucible and hones seem to vouch for man as well, so that it is impossible to assign any of these huts to either sex in particular. The complex of pits adjoining house VII were doubtless annexes to that hut, and may be interpreted as two store-pits with an intervening kitchen.

One other fact seems to emerge from the survey of the site, which fails to bear out the view advanced by Mr. Peake, namely, that 'the valley villages' (and in these I suppose he would include that at Sutton Courtenay) 'were usually roughly circular or oval in form, consisting of a ring of houses, stables, and barns, surrounding an open space, and surrounded in turn by a fence'.³ At Sutton Courtenay it is evident that the village was laid out in almost straight

¹ *Reallexikon der germanischen Altertumskunde* (Hausgrube), by Hjalmar Falk.

² *Ibid.*

³ *The English Village*, p. 105.

rows of houses, nearly all orientated in the same direction. One of these lines has been actually discovered; for another we have the evidence of the workman, whom no amount of cross-questioning would move from his assertion that another line parallel to the first and approximately in line with house X had been dug through at no distant date; and we have possible evidence of a third line in house XI.¹ It would seem that the early Saxon settlement was laid out on a definite plan and had not the rather haphazard arrangement which many English villages now show as the result of being built along some winding foot-path or trackway.

In my prefatory remarks I mentioned that this was not the first occasion that discoveries of this nature have been made in the Thames Valley, but that Stone who reported on these discoveries to the Society seems to have failed to recognize their significance, as will be gathered from the accounts in his report extracted from an early volume of the Society's *Proceedings*.

Standlake (Proc. Soc. Ant., 1st Ser., iv, 98).

'A sixth gravel-pit, opened on the 26th March, two or three furlongs eastward of the second, disclosed an excavation (*a*) of an irregular shape, differing essentially from any previously discovered, as shown in the plan, prepared from careful measurement; it was about 12 ft. across, while in depth it was about 13 in.; it had been cleaned out before I saw it, but the spot (*b*) was pointed out to me where the workmen found unquestionable signs of fire; a heap of ashes, intermixed with burnt bones, lying there. The excavation (*c*), 1 ft. in diameter and 2 ft. in depth, was not discovered till the larger one (*a*) had been destroyed; its situation could therefore only be guessed at: at the bottom was found a stone measuring nearly as much in circumference as the hole (*c*) in which it was placed, and 4 to 5 in. in thickness. On the right of the line *d, d*, was an old gravel-pit, which had cut off a portion of the excavation now discovered. Here were found portions of bone needles, and an implement in bone somewhat similar to what ladies at the present day term a stiletto, which they use for making eyelet holes in muslin or other fabrics. From the large quantities of fragments of bone found here, it may not be altogether unreasonable to conclude that the above-mentioned, and perhaps other articles of a similar kind, were manufactured on the spot; especially as there were also found numbers of thin sharp flints, which had in all probability been applied to the purpose of smoothing and finishing off these implements. As may be seen, the excavation was just of about sufficient depth to allow the artisans to sit comfortably round the outside, provided their legs were of moderate length.'

Yelford (Proc. Soc. Ant., 1st Ser., iv, 214 ff.).

'January 12th, 1858.—An excavation about 12 ft. across each way, and 1 ft. 6 in. in depth, was disclosed on removing the soil for the purpose of obtaining gravel about two furlongs north-west of the cemetery near Yelford. It contained fragments of bones of animals, pieces of coarse black pottery, one very large, and several small stones upon

¹ Three houses along a line north from and parallel to the main line have been discovered.

which marks of fire were visible, sundry pieces of lignite, and a few ashes. A bone pin, a bone spindle-whorl, and another object in bone, together with a small fragment of an urn, which may be safely referred to the Anglo-Saxon period, were also obtained from among the contents of the excavation. The spindle-whorl was evidently left in an unfinished state; it has never been polished, but bears distinct marks of the tool with which it was roughly cut into shape. There is a remarkable agreement in size, shape, and depth, between the excavation in which these objects were found, and that discovered last year at Stanlake, which contained articles of a similar kind (*Proceedings*, vol. iv, p. 98). From appearances I was led to infer that the excavation discovered upon that occasion had been used in the manufacture of the things found in it; the fact of an object in an unfinished state having been found in the excavation disclosed on the present occasion might lead to a similar inference. I was informed that several graves containing human remains had been previously discovered at this spot, and that two bone spindle-whorls, one of which has been handed to me, had then been obtained.'

Stanton Harcourt (Proc. Soc. Ant., 1st Ser., iv, 215).

'January 25th.—Proceeded with two men to Stanton Harcourt for the purpose of investigating some ancient remains, traces of which had been disclosed on opening a gravel-pit. Continued the investigation during that and the following day, when we discovered several excavations which differed but little in character from those found last year at Stanlake. The contents were also of a similar kind, comprising fragments of earthen vessels, which appeared to have been used for domestic purposes, stones which had been subjected to the action of fire, pieces of thin sharp flint, and bones of various animals. In one we observed a stratum of ashes, among which was a quantity of parched corn. A considerable number of excavations had been destroyed by the gravel-diggers prior to our visit, and from the appearances there are no doubt many others still to be found beneath the soil.'

Besides these, which indimensions and contents correspond exactly to the discoveries at Sutton Courtenay, there is not wanting evidence that other sites of the same nature have been disclosed at one time or another. Such are those at Lower Heyford, Yarnton, and Eynsham, which produced the objects illustrated along with others from the already mentioned sites at Standlake and Yelford.

It is clear from the evidence of the finds in the cemetery at Yelford that that cemetery must have come into use in the sixth century, and though the relative positions of the cemetery and the occupation-site, except that they were within $\frac{1}{4}$ mile of one another, are no longer known (for all efforts to trace their whereabouts have regrettably so far met with no success), yet it is permissible to suspect that the two were intimately connected and that therefore the objects found at Yelford also belong to the sixth or early seventh centuries, that is, to the early period of the Saxon occupation.

Such, however, must almost inevitably come to light, and it is to be hoped

that many more of these Saxon villages will be observed, thus enabling us to add considerably to the map of the places occupied by the Anglo-Saxons soon after their arrival in this country, hitherto known mainly by their cemeteries.

DISCUSSION.

Mr. REGINALD SMITH said the discovery reflected credit on the Ashmolean Museum, where the finds would no doubt be deposited. One of the questions raised by the paper was the date of flint flakes or implements found on the site: were they of earlier dates, included in the soil by accident, or of contemporary make for striking fire? The variety of patina suggested that some, even if found on the surface, were of much greater age than the dwellings, whereas others had a fresh appearance, and some had been noted together on the floor. The two jewelled brooches from Milton were well known, but the circumstances of their discovery imperfectly recorded; could they belong to the cemetery of the people who lived on the site under excavation? If so, one would have expected some typical finds in metal; or if the dwellings were later, coins would be expected. The clay rings were also found in Holland and had generally been assigned to the Early Iron Age; but Mr. Leeds had shown that some at least were of Saxon date. It was strange that post-holes were the only clue to the walls; in the absence of charred wood or burnt daub from an accidental fire, it occurred to him that the walls might have been of rammed earth (*pisé de terre*), which would leave behind the powdery mould mentioned in the paper. The heaps of raw clay might have been for potting, the domestic hearth being used for firing the ware. He regarded the stilettos as tools for incising pottery; and quoted two examples in the British Museum (from Sandy, Beds., and Malton near Barrington, Cambs.) of the scalloped edge or rib on one of the exhibits.

Mr. BUSHE FOX thought a Saxon occupation of the site had been proved, but was not convinced that they were the only people that lived there. Some of the pottery was obviously Roman and later than the Roman brooch of the first century. The proportion each kind of ware bore to the whole must be ascertained, but he thought that many of the exhibits dated from the Early Iron Age; and Mr. Leeds had mentioned finding round pits with one sort of pottery. Some of the flints might be just pre-Roman, others probably much earlier. Merely on the evidence of that site he thought it would be rash to assert that all but the obvious cinerary-urns of the Bronze Age belonged to the Saxon period, early or late.

Mr. HEMP brought forward the hypothesis that the clay rings were to support cooking-pots on the fire. At a slightly earlier date there were, in the hill-forts and hut-circles of Wales, small triangular objects of clay burnt all over. Late Romano-British buildings and pottery in Wales resembled those described in the paper, the regular house plan being twice as long as it was broad—say 10 yds. by 5 yds.

Mr. LEEDS agreed that the flints were a difficult problem, but he was continually on the alert for evidence. They were certainly found on the surface and at all depths in the soil, in some cases on the floor of a house. Two large scrapers had been met with in a charcoal layer at the bottom of a pit. There was so little Roman pottery in proportion, that he was inclined to disregard it: much more would be expected if the site were Roman. The large pottery vessel on exhibition had been used and was not spoilt in firing: the redness inside had been produced by cooking liquids. The date of the village was at present uncertain; but if Saxon, he would prefer the pagan period, to which the not distant cemeteries of Frilford and Long

192 SAXON VILLAGE NEAR SUTTON COURTENAY, BERKS.

Wittenham belonged.¹ If similar things found at Eynsham were later than 571, a date about 600 would be indicated. The occupants of the site had certainly laid out their village better than the medieval plan described in Mr. Harold Peake's recent book.

The PRESIDENT said that systematic excavation had, as usual, produced new matter for discussion, and he observed that the houses and pits had been treated together. For the latter it would be well to refer to Mr. Clinch's paper on those found on Hayes Common.² Wooden buildings were liable to catch fire, and some of the pottery might thus have been twice burnt. That the pottery rings served as pot-stands was not a mere hypothesis as such were used by modern Kaffirs, and the pattern dated from the Bronze Age in south-east Spain. A parallel to the smallest vase was one of two in the British Museum found with coins of Henry III and Edward I.³ The hog-backed knife he regarded as a flenching tool; and as to the flints, he could only say that every excavation in the flint area produced worked specimens of many types. Mr. Crawford's time would be fully occupied if every Saxon site had to be marked on the Ordnance maps.

¹ At the date of the reading of the paper the exploration of house X had not been completed. It was, however, thought advisable to incorporate in the paper the important evidence obtained from that house. This will account for the apparent discrepancy of some of the remarks made in course of the discussion.

² *Proceedings*, xii, 258; *Journ. R. Anthropol. Inst.*, xxix, 124.

³ Roach Smith collection, *Cat.* nos. 583, 584.

VIII.—*Instances of Orientation in Prehistoric Monuments of the British Isles.*
By Rear-Admiral BOYLE SOMERVILLE, C.M.G., F.S.A.

Read 3rd May 1923.

THE occurrence of orientation in prehistoric structures has long been noticed. It has not, however, received from investigators much more than a passing comment, such as 'the barrow is directed to the eastward', or 'the entrance to the chamber faces the north-west'. If a definite bearing is given, it is rarely stated whether it is 'Magnetic' (such as is obtained from a prismatic compass), or a True Bearing, i. e. an azimuth.

The vagueness, and the variability in direction thus indicated, have brought about indifference to the subject of orientation, doubt, or even complete disbelief in its occurrence in any megalithic structures.

Discredit and even derision have, moreover, been brought on the whole subject through the visionary ideas of some enthusiasts, who have tried to import into the subject far more than the cold facts of science can sustain; so that, with them, we become confronted by numbers of (neolithic) 'astronomer-priests', sacrificing to the Sun, singing psalms to the Moon, and saluting the Stars. Even the numbers of stones composing a Circle, and the 'cubits' that are comprised in its dimensions, have been called upon to provide mystical figures and proportions—an entire prehistoric arithmetic and astrology. It is no wonder, then, that the unmathematical, but otherwise scientific, archaeologist has repelled any suggestion of orientation in these ancient structures.

The truth of its existence has, however, to be faced. Whenever, as in the examples to be presented in this paper, exact methods of land-survey and of practical astronomy are brought to bear on the problem, all vagueness of direction is found to disappear, and the very remarkable fact emerges of definite and exact orientation in these monuments to certain points of the horizon, limited in number, at which sunrise or sunset takes place on days of the year still remembered and acknowledged in our calendars, and (to some degree) in our daily life, as dates of religious or other significance.

Before proceeding further, some explanation is needed, so that the reader may clearly understand in what 'orientation' consists, as applied to the monuments to be described later in this paper.

There are two kinds of orientation, namely, terrestrial and celestial orientation. With the first of these two we are not here concerned. It is that orientation, or 'lay-out', of a structure which is made with reference to some local object; so that the outlook shall be, perhaps, towards some special mountain, or river, or scene of natural beauty; or, perhaps, for convenience, in order that a building may take up the line of a road or a street. To these should be added orientation towards some holy place or city, such as towards Mecca, as practised by Mahommedans.

Celestial orientation, on the other hand, is the lay-out of a structure with reference to the point of the horizon at which the Sun, the Moon, or some Star may be seen rising or setting, on some particular day of the year. It refers also to a lay-out towards the North point or the South point of the horizon, or of the heavens—the indication, namely, of the Meridian.

Celestial orientation may be conveyed by three different methods, as follows:

First, through being introduced into the lay-out of the actual megalithic structure. It becomes apparent to the eye chiefly when the ground-plan of a monument has been plotted, and the angle that its axial line makes with the True Meridian of the position is correctly laid down. This form of orientation should always be present, but can be supplemented by either or both of the two other following methods.

Secondly, by means of sight-lines taken from some point within the monument to an *artificial* object, such as a pillar stone, cairn, or boulder placed at some distance outside it, on the required azimuth, either on the sky-line or elsewhere.

Thirdly, by means of sight-lines to some conspicuous *natural* object, such as a sharp hill-top, a 'tor', or sometimes a marked dip in the hill-horizon seen against the sky.

The chief difference between the second and third forms lies in the fact that in the third the monument itself has to be built in such a position that the natural object shall be on the proper azimuth from it; while in the second the geographical position is of no particular concern; for the cairn or standing stone, etc., can be placed by the builder in any desired position as regards the monument, on the sky-line or otherwise. Though this last form is, naturally, the most certain and satisfactory to the investigator, the other must by no means be discarded.

As regards celestial orientation generally, the instances of its occurrence which form the subject of this paper are those which refer to Sun orientation only.

In the opinion of the writer, it will be possible eventually to establish the

existence of Star orientation, and perhaps also of Moon orientation. It seems but logical that both should occur, if orientation can be accepted as regards the Sun. There is, however, as yet not enough definite scientific evidence available to prove either that of the Stars or of the Moon. In the remarks that follow a passing reference will, however, be made to Star orientation.

Nor will the question be entered into of dating the construction of any monument through the change in obliquity of the Ecliptic (and consequent change in azimuth of sunrise, etc.), which has taken place since its erection, though this is one of the important sequels to the proof of the existence of orientation in megalithic structures. It is a whole large subject of its own, and one of which the physics and mathematics on which it is based are more suitably discussed elsewhere; though it embraces several archaeological considerations also. It may be said, however, that the dating of monuments in this manner is possible only in the case of Star orientation.

With Sun orientation the change in azimuth of the point of sunrise at the two solstices (which are the only points of the Sun's annual movement concerned) is very small; and, at the latitude of London, has amounted to less than 1° of bearing in the past four thousand years. An error in the estimated azimuth of the axial line of a megalithic structure of only $1\frac{1}{2}$ minutes of bearing ($1' 20''$) would suffice to throw the resulting date out by a hundred years. No one who has made an accurate ground-plan of these ancient ruins, and who has thus been able to realize the irregularity of their lay-out, would allow that so close an accuracy was possible. The probability of error is certainly $\pm 20'$ of bearing, if not more. Besides this, there are other important objections, into which we need not enter here.

In the case of the Stars, however, the change in azimuth of any star-rise is very much greater; so that, as regards dating, an error of determination of the axial line of a monument becomes less important. The group known as the Pleiades, for example, during the period 2000 to 1000 B.C., changed the azimuth of its rising point by $9^{\circ} 2'$, or at the rate of $54' 10''$ of bearing per hundred years. An error, consequently, in the bearing of an axial line of $\pm 20'$ would not, in this case, greatly affect the resultant date.

Following this general statement on orientation in its various forms, it is now necessary to give further particulars respecting Solar orientation, with which this paper is specially concerned.

It must be realized, first of all, that there are practically no traditions or written statements extant referring to the orientation of megalithic structures. We are almost wholly in the dark: nothing adheres to the memory of these monuments of antiquity in the countryside in which they are found, beyond,

occasionally, some strange or fanciful name ; some ancient custom ; some connexion of the stones with ' the Druids ', with magic, or with fairies.

In any attempt to recover their history and meaning we are thrown, therefore—

- (1) on the results of scientific observation, above ground ;
- (2) on whatever relics, such as grave-furniture, may be found on each site, at measured distances below the present land-surface ; and
- (3) on any analogies which may be made with similar structures in other lands.

With regard to orientation, which comes under the first and last of these categories, the lines of direction, or azimuths thus disclosed, and now to be described, are found to be those of certain specific sunrises or sunsets. It is necessary to say here that these azimuths were not, as it were, ' forced ' on the subject by any preconception of the surveyors as to what *ought* to be found in it. The contrary is the case. It was the monuments themselves that, first of all, instructed us in the special azimuths on which they were laid out. Orientation was not suspected by the earliest investigators ; and the idea has gradually evolved from being first a mere suspicion, next into a possibility, expressed in wide terms of bearing, and now into some approach to certainty, as surveys of existing monuments have become more accurate and their azimuths more correctly calculated. When the plans of various megalithic structures thus surveyed are brought together for comparison, with their azimuthal lines accurately laid down, it is seen at once that there are certain identities of bearing between them. The fruit of these comparisons (so far as orientation is concerned), namely, the actual sunrise and sunset bearings that have been discovered, are those shown in the following diagram (fig. 1), the actual bearings there shown being those observable at a position, chosen for convenience, in latitude $51^{\circ} 30' N$.

The plans of a few of the actual monuments in which these azimuths are found (a representative selection from surveys made by the writer) will be given further on, with short descriptions in each case.

At any fixed position on the Earth, during the course of a year, the point of sunrise moves northward from a point on the south-eastern horizon of an observer, reached on (about) 22nd December, and named the *Winter Solstice*, to another extreme point on the north-eastern horizon, reached on (about) 21st June, and named the *Summer Solstice*. The Sun then moves back again southward to the extreme point reached in December, and so on.

The azimuth of these two extremes of the Sun's path—the points of Solstitial sunrise—are frequently found in megalithic structures. We may conjecture that these were probably the first two facts of solar astronomy to be noticed ; and, as the observation of these events denotes residence at a single spot for at least a whole year, we may infer that the race of mankind who first acquired

this knowledge had reached a fairly settled stage of civilization, and that they probably practised agriculture.

From a calendar point of view these two sunrise events divide time into equal portions, as reckoned by days, into what we should term half-years. We find from the monuments that a further subdivision of time became necessary, either from agricultural motives, from religious motives, or from motives connecting the gift of food with prayers for that gift, required to be made at auspicious moments to the Giver.

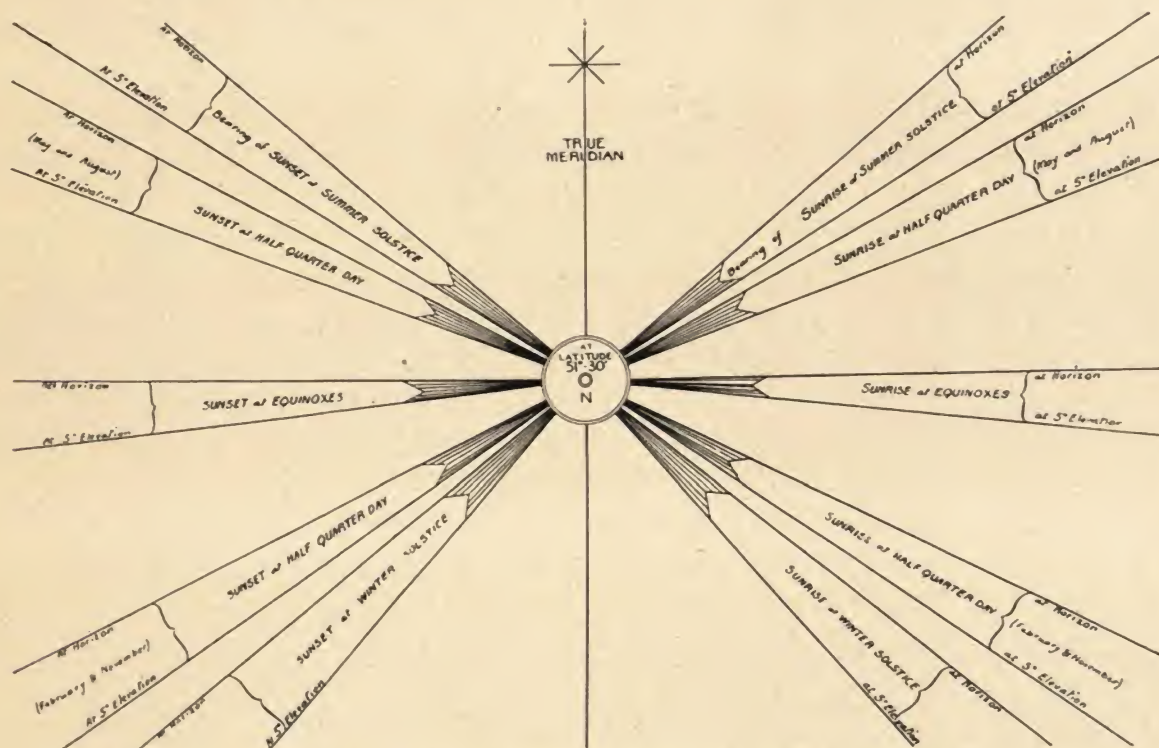


Fig. 1. Diagram of sunrise and sunset azimuths at latitude 51° 30' N.

Accordingly, the position of sunrise on the middle day between the two Solstice extremes was noted; producing the dates known to us as the *Equinoxes*, namely 21st March and 21st September of our calendars.

The period between one Winter Solstice and the next—one year—was thus divided into four equal portions of days.

The conjecture may here be hazarded that these divisions would probably suffice, from an agricultural point of view, for peoples inhabiting tropical or semi-tropical countries; but in temperate regions a different arrangement of times for sowing, reaping, etc., would become necessary, while not abandoning the original dividing points of time.

However this may be elsewhere, in Scotland and in Ireland azimuths are

found to the sunrises of the days that halve the periods between the Solstices and the Equinox, thus dividing the year into eight equal parts. In our present calendar these dates are 4th February, 6th May, 8th August, and 8th November.¹

Some recollection of these ancient divisions of time remain to-day. In England, for example, payment of rent is made on 'quarter-days'—namely, at the Solstices and Equinoxes. In Scotland rents are paid on the 'half-quarter-days'—which now, through changes in the calendar, presumably, are reckoned each of them three days later than those given above in February, May, etc. A lingering taste of Pagan days may also be discerned in the recognition of 'May Day' and of 'All Hallows', with their fairies, witches, and divinations for 'luck'. These are common to all the British Isles, though the dates have now become transferred to 1st May and 2nd November respectively.

In the prehistoric monuments both of Scotland and Ireland orientations to the sunrises of the (astronomical) *half-quarter-days* are fairly common.

In the latter island, the tradition is that the May Day Festival, which is named 'Bealltaine' in Gaelic, was established by King Tuathal, the Acceptable, who reigned in the first century of the Christian era. If this is true, it would appear that the construction of Stone Circles, or of other megalithic remains containing this orientation, persisted to what may almost be called recent times.

There are thus five sunrise-points of the Eastern horizon, and five sunset-points of the Western, to which orientations have been found. Besides these, there is also found the line of the Meridian, true North and South. How these two points of the sky or of the horizon were decided on by the builders of megalithic monuments it is not yet possible to say; but their occurrence is undoubted.

It is necessary to state here that these twelve azimuths are the *only* ones ever found among solar orientations in these islands; and also that, so far as it is possible to recover them, they are exact for the dates whose sunrises and sunsets are indicated. There is sometimes an error up to 3° or 4° in the Meridian line, which is perhaps intelligible, since it could not have been indicated by sunrise or sunset; but usually this orientation, too, is exact.

The angular space given on the diagram (fig. 1) at each sunrise-point now needs explanation. In these latitudes the Sun, at no time of the year, either rises or sets perpendicularly; but always at an angle with the horizon. That is

¹ The actual dates of the present calendar on which the Solstices, Equinoxes, and 'Half-Quarter-Days' fall are liable to alteration, owing to the operation of the Gregorian Calendar, through the fact that the Tropical year is not an integral number of days. The Summer Solstice, for example, may fall on 20th, 21st, or 22nd June. For an explanation, the reader is referred to the notes on the 'Longest Day', given under the astronomical events for June, in *Whitaker's Almanack*.

to say, as it rises or sets, it is also constantly changing its azimuth (or 'bearing'). If, for example, from some inland position, the first appearance of the Sun were over a mountain crest, elevated $5^{\circ} 00'$ above the level of the observer's eye, its azimuth would be considerably different from that seen from the same position, if the mountains were removed, and the sunrise took place above the level horizon—elevated $0^{\circ} 00'$, as it would be described mathematically.

In these investigations for orientation we have to put ourselves in the position of the original builders of the monuments, and see sunrise or sunset as they saw it. Then, by mathematical methods, to deduce from the azimuth and altitude at which they saw it, the date of the particular sunrise or sunset in question. The radial lines, accordingly, shown in the diagram, indicate the difference in azimuth on each particular orientation between a sunrise or sunset seen on an horizon elevated 0° , and one elevated 5° , all at the latitude $51^{\circ} 30' N$.

The azimuths given include the necessary corrections for atmospheric refraction, and horizontal parallax of the Sun. In the absence of knowledge as to whether the point of *first* emergence of the Sun above the horizon was that looked for by the builders of these monuments, or whether the moment of *complete* emergence was taken, when the whole disc of the Sun was seen standing on the horizon, the azimuths given are calculated for the *mean* point—the Sun's centre.

This may seem to be an unnecessary refinement; but in southern England, for example, the Sun changes its bearing while rising from about $20'$ to $40'$, according to time of year, between the moment of first emergence and of that of the complete disc being visible. In northern Scotland the change is considerably greater.

Some definite point within the sun's perimeter must therefore be chosen, if only for the purposes of mathematical calculation; and the central one is obviously the best.

We may now proceed to demonstration of actual examples of the various kinds of orientation shown in fig. 1, as discovered in several different types of megalithic structures.

It is not possible to identify any particular orientation with any single class of monument: indeed, in many cases, two or more different orientations are discoverable in the same monument; but the demonstration will be made as widespread as possible, in order to show that orientation exists in all of them, of whatever description.

STONE ALIGNMENTS.

It will, perhaps, be best to begin with that type of monument which is probably the most ancient, is certainly the simplest, and seems to have no other signification than to indicate a line of direction—an 'orientation'. The reference is to Stone alignments of two or more megaliths.

Groups of two, three, five, or more Standing Stones placed in a single alignment are fairly common in the south of Ireland; and, on first seeing them in the field as they stand, we might, at a cursory glance, consider them as almost

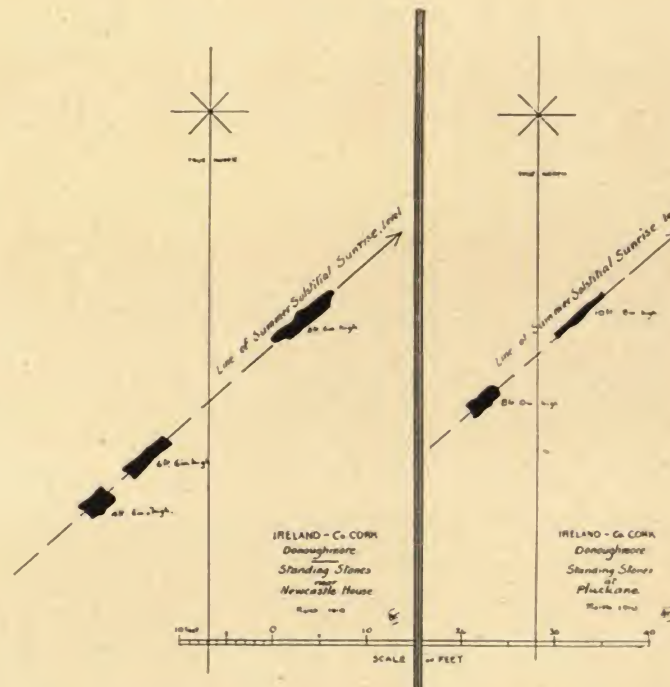


Fig. 2. Ireland—co. Cork—Donoughmore: plan of alignments near Newcastle House and at Pluckane.

devoid of interest. When, however, a survey is made showing the plan of the stones at the point of emergence above the (present) land-surface, and when they are plotted, as above, with the respective Meridian lines properly laid down, with the north end upwards in each case (as in every modern geographical map), a considerable point of interest arises; for then the orientations become at once apparent. In the instances shown, it happens that both groups are directed to Midsummer (Solstitial) sunrise; but this is not invariable with this type of monument, though it is frequent.

Another form of alignment, perhaps a later development, is that shown in fig. 3. Two examples are given: one in county Cork, and the other in Argyllshire, near Oban, at the southern end of Loch Nell.

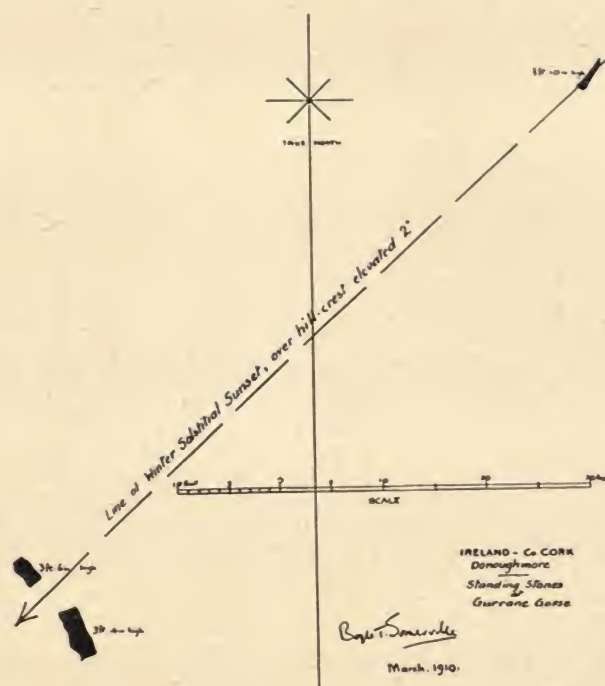


Fig. 3. (a) Ireland—co. Cork—Donoughmore : plan of alignment at Gurrane Gorse (Winter Solstitial sunset).

ARGYLL-SHIRE - 6" Sheet XCVIII SE.

Stone Alignment adjoining
"Serpent Mound," at south
end of Loch Nell. (Not
marked on Ordnance Maps)
Height above Ordce. Dalum 65ft.
Lat. $56^{\circ} 23' 13''$ N.
Long. $5^{\circ} 26' 00''$ W.
Oct. 10th 1910

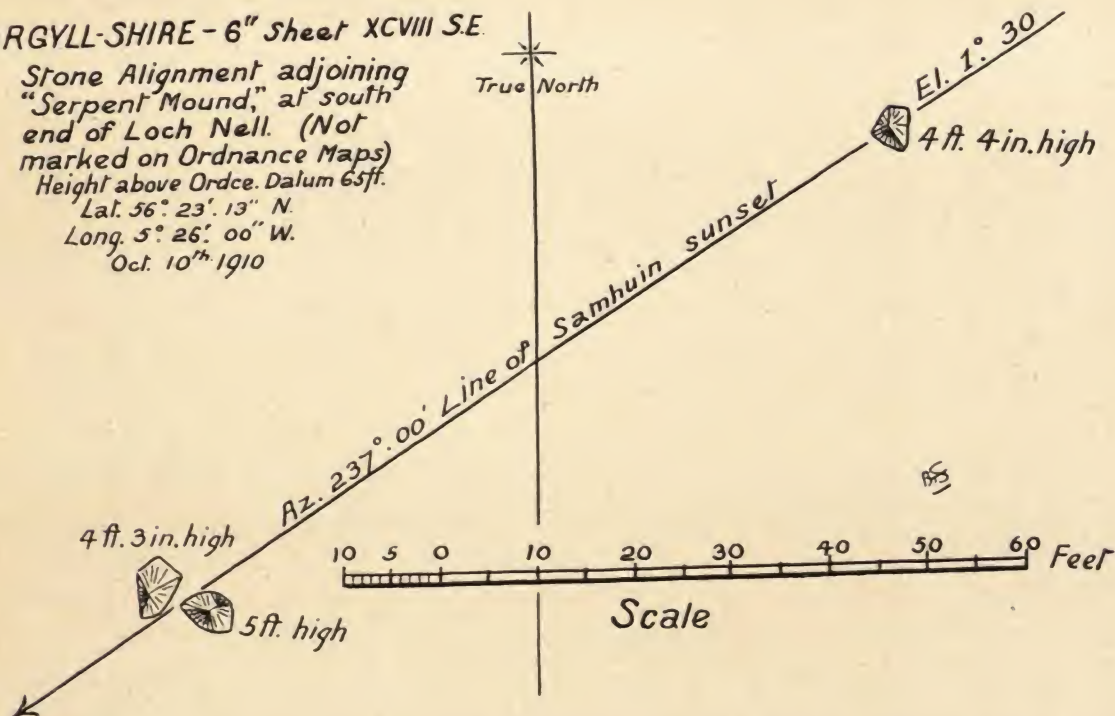


Fig. 3. (b) Scotland—Argyllshire : plan of alignment at southern end of Loch Nell (Samhuin sunset, Nov. 8).

The desired orientation is obtained by an alignment taken from a single Standing Stone, through the gap or notch formed by two others standing close together. In the Irish example the stones are untrimmed slabs of moderate height, and the alignment indicates the Winter Solstitial sunset.

In the Scottish group, three large rough pyramids of stone have been chosen and placed in the required position to produce one of the 'half-quarter-day' orientations, namely that of 8th November. This date (or rather that of 2nd November, to which, as explained above, it has been transferred) is specially named 'Samhuin' (pronounced almost as 'Sow-wen') in Gaelic, both in Ireland and in Scotland.

A very conspicuous instance of alignments is exhibited in the plan (fig. 4) of the great monument of Tursachan Challanish, standing on a bleak moorland peninsula on the west coast of Lewis, in the Hebrides, fourteen miles across the island from Stornoway. The positions of all the stones standing in 1909 is shown, and their relation to the True Meridian.

The main scheme of the monument consists of four alignments of Standing Stones, of differing lengths, all radiating from a common centre: the whole structure being roughly cruciform. There is one alignment running due South (true); a second, shorter one, directed West (true) to the point of sunset at the Equinoxes.

These are both of them (probably) Sun orientations. A third alignment, a short one, like the western arm, is directed a little to the northward of true East; and a fourth alignment, by far the longest of them all, and presumably the most important since it is doubled so as to form an 'avenue', is directed a little to the eastward of North (true). As the builders (if so they may be termed) of this monument had evidently no difficulty in laying out with exactitude either the line of the Meridian—or South (true)—or of the Equinoctial sunset—West—we must suppose that the deflexions of the two other alignments from true East and true North respectively were made with fixed purpose.

As the azimuths on which they are laid out do not refer to the Sun on any of the usual days of orientation—and that to the northward not to the Sun on any day whatever—we are probably justified in considering these lines of stones as having been directed to certain star-risings.

The subjects of Star orientation, and of the dating of monuments through orientation, have been purposely excluded from this paper; but it may at least be remarked that along either line of stones forming the long northward avenue the star Capella (α Aurigae) was seen rising above the hill-horizon in that direction just before sunrise on the day of the Winter Solstice in 1800 B. C.; and that along the Eastern line the conspicuous star-cluster known as the Pleiades was seen rising, also just before sunrise, on the day of the Spring Equinox.

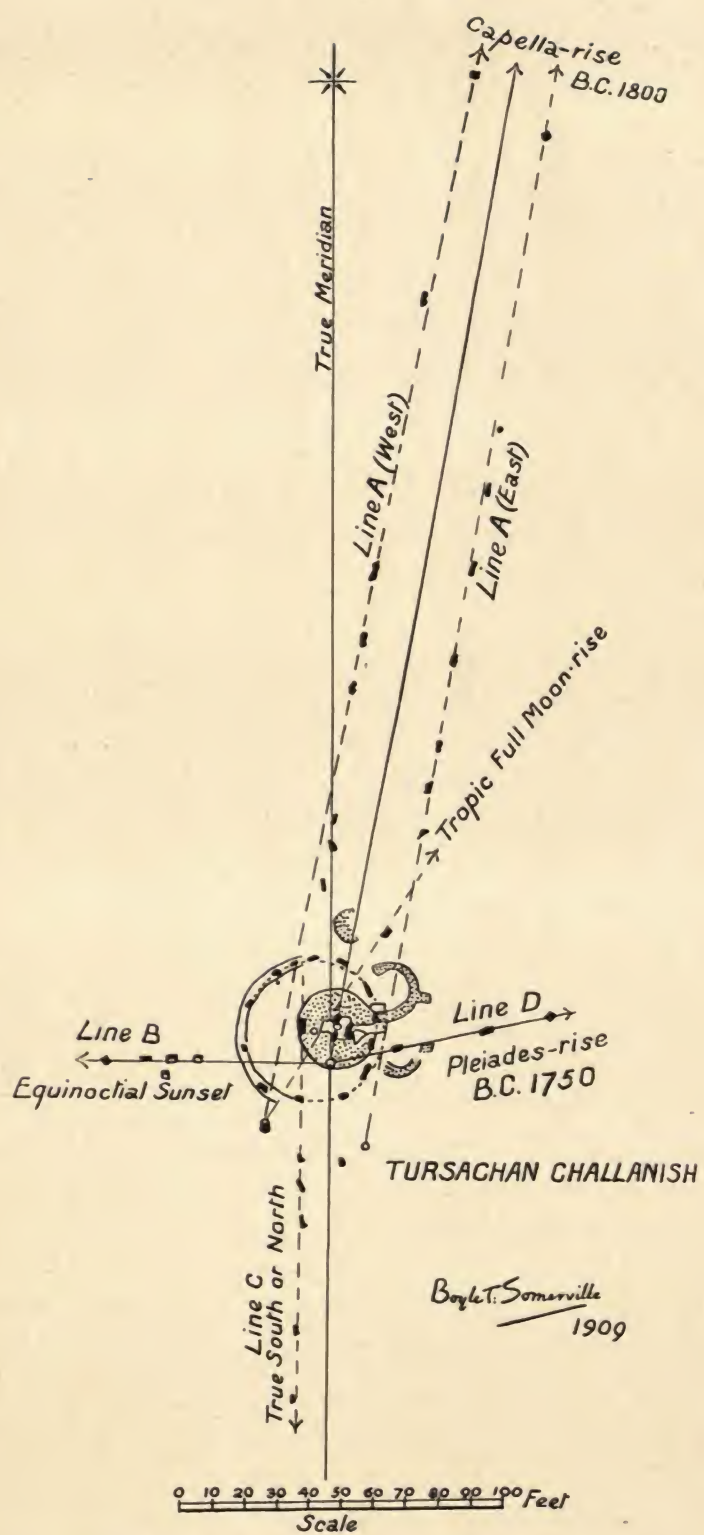


Fig. 4. Scotland—Hebrides—Isle of Lewis: plan of alignment, 'Tursachan Challanish'.

(21st March) in 1750 B. C. Both stars thus rose 'heliacally', as it is termed, and each of them warned, by its rising in the dawn, one of the regular sunrises of

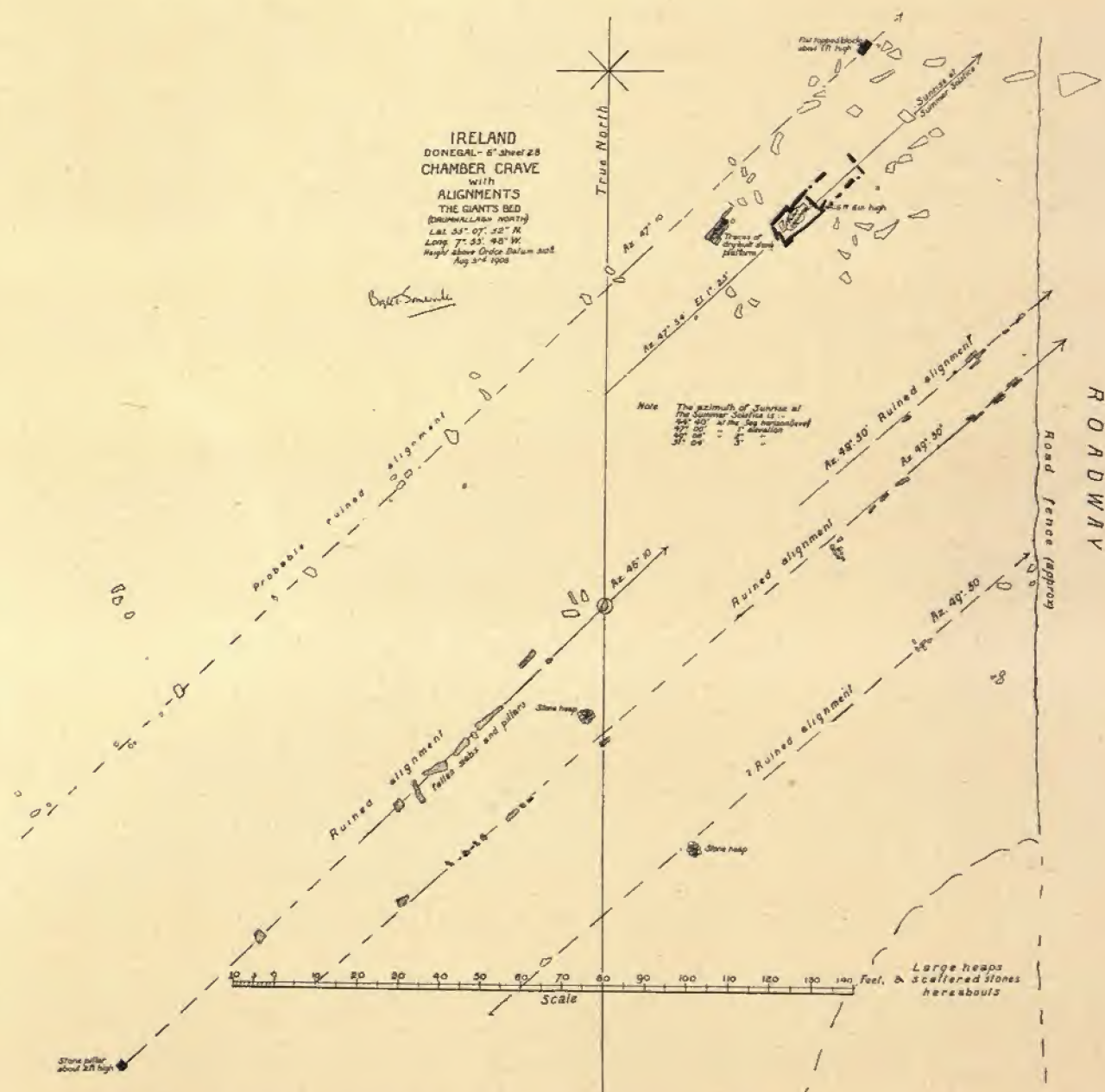


Fig. 5. Ireland—co. Donegal—Lough Swilly: plan of chambered grave, with stone alignments at Drumhallagh, 'The Giant's Bed'.

solar orientations. The closeness of the two dates thus arrived at, and the connexion of the star-risings with the solar events above noticed, is at least interesting; for it is of just such 'warnings' by certain stars (amongst which

are named Capella and the Pleiades) that mention is made by Virgil, when singing of the affairs of agriculture.

With the remaining structures at Challanish, shown on the plan, namely the so-called 'Circle' (which is an oval), the great Standing Stone, and the small cist-burial, lying within its perimeter, we are not here concerned. A full

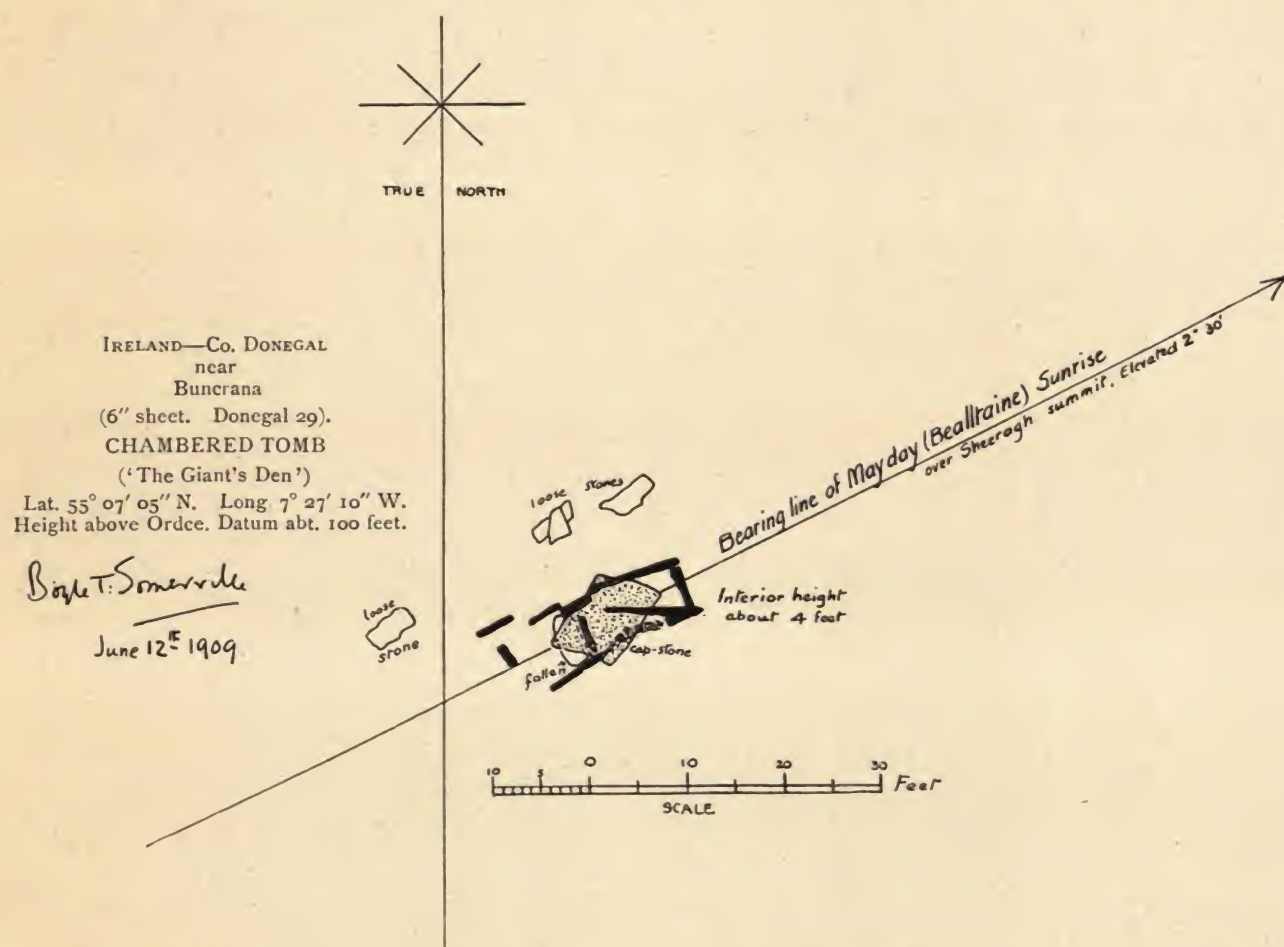


Fig. 6. Ireland—co. Donegal—Lough Swilly : plan of chambered grave near Buncrana, 'The Giant's Den'.

description will be found in a paper by the present writer which appeared in the *Journal of the Royal Anthropological Institute* in 1912, vol. xlii, p. 23 et seq.

CHAMBERED GRAVES.

The association of stone alignments with other monuments is occasionally found among the megalithic remains of these islands; and the Chambered Grave shown above, in fig. 5 with its accompanying alignments, may serve as a notable instance. Though both grave and alignments are grievously ruined, the orientation is quite undoubted, and is to the Summer Solstitial sunrise.

Fig. 6 shows the ground-plan of a less-ruined Chambered Grave; in this example, without associated alignments. One of the great capstones, though

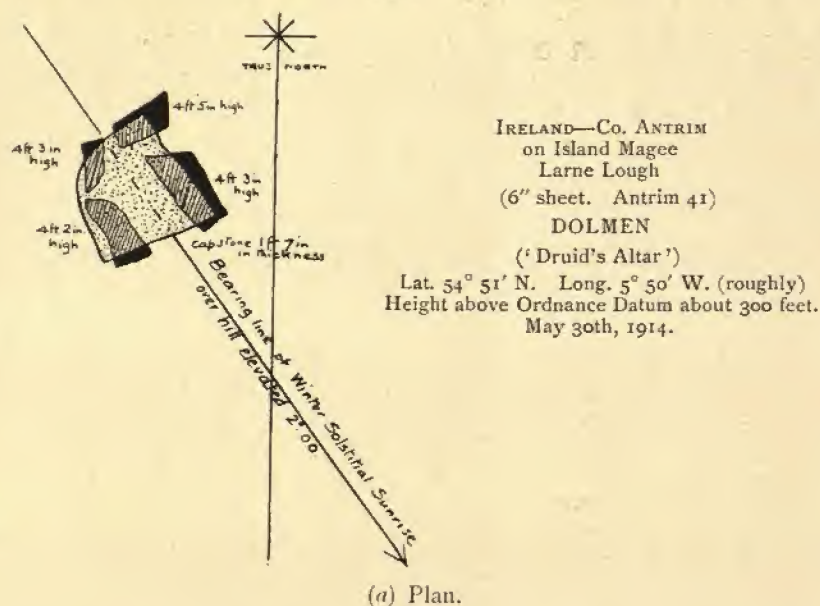


Fig. 7. Ireland—co. Antrim—Larne Lough, Island Magee: plan of chamber-dolmen, ‘Druid’s Altar’.

not quite in its original position, still remains on its supporting slabs. The orientation, it will be noticed, is to a different point of the horizon from that shown in fig. 5, namely, to the sunrise of Bealltaine (6th May), one of the ‘half-quarter-days’ to which reference has already been made.

DOLMENS.

The structure illustrated in fig. 7 shows a transitional form between a true Dolmen and a Chamber Grave. Whether these two forms of monument were contemporaneous, or which preceded the other, need not now be discussed. The Chamber type, such as is here shown, was probably covered over, in all

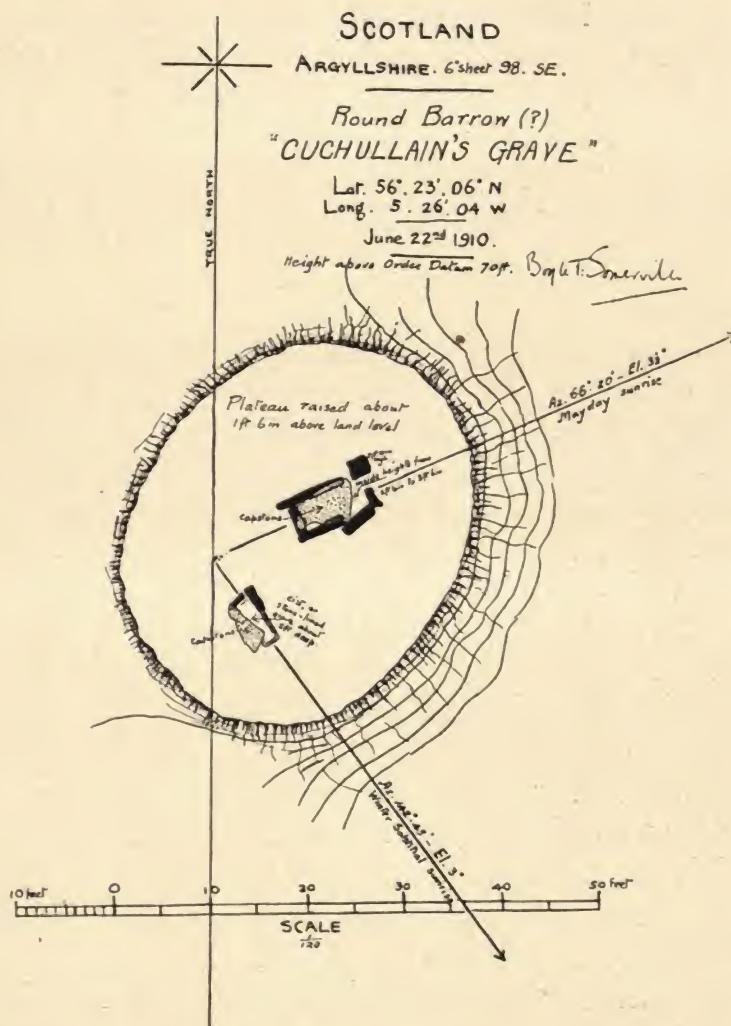


Fig. 8. Scotland—Argyllshire—Loch Nell: plan of chamber-dolmen and burial cist in (remains of) round barrow, 'Cuchullain's Grave'.

cases, by a tumulus; while the true Dolmen (at least in some cases) was not so concealed. There is, however, no vestige remaining of the tumulus in the present instance.

The monument is in a good state of preservation as regards its four massive supporting slabs, and even more massive capstone; but the closing 'door' (if

there ever were one, as we must suppose) and the contained burial have disappeared.

There is no uncertainty as to the orientation, which is to Winter Solstitial sunrise.

The accompanying view shows the appearance and present surroundings of this Chamber-dolmen. Civilization of the modern kind has overwhelmed it; and the monument, no doubt, of a hero, has become an ornamental rockery, facing the approach to a stucco-faced villa of the baser sort.

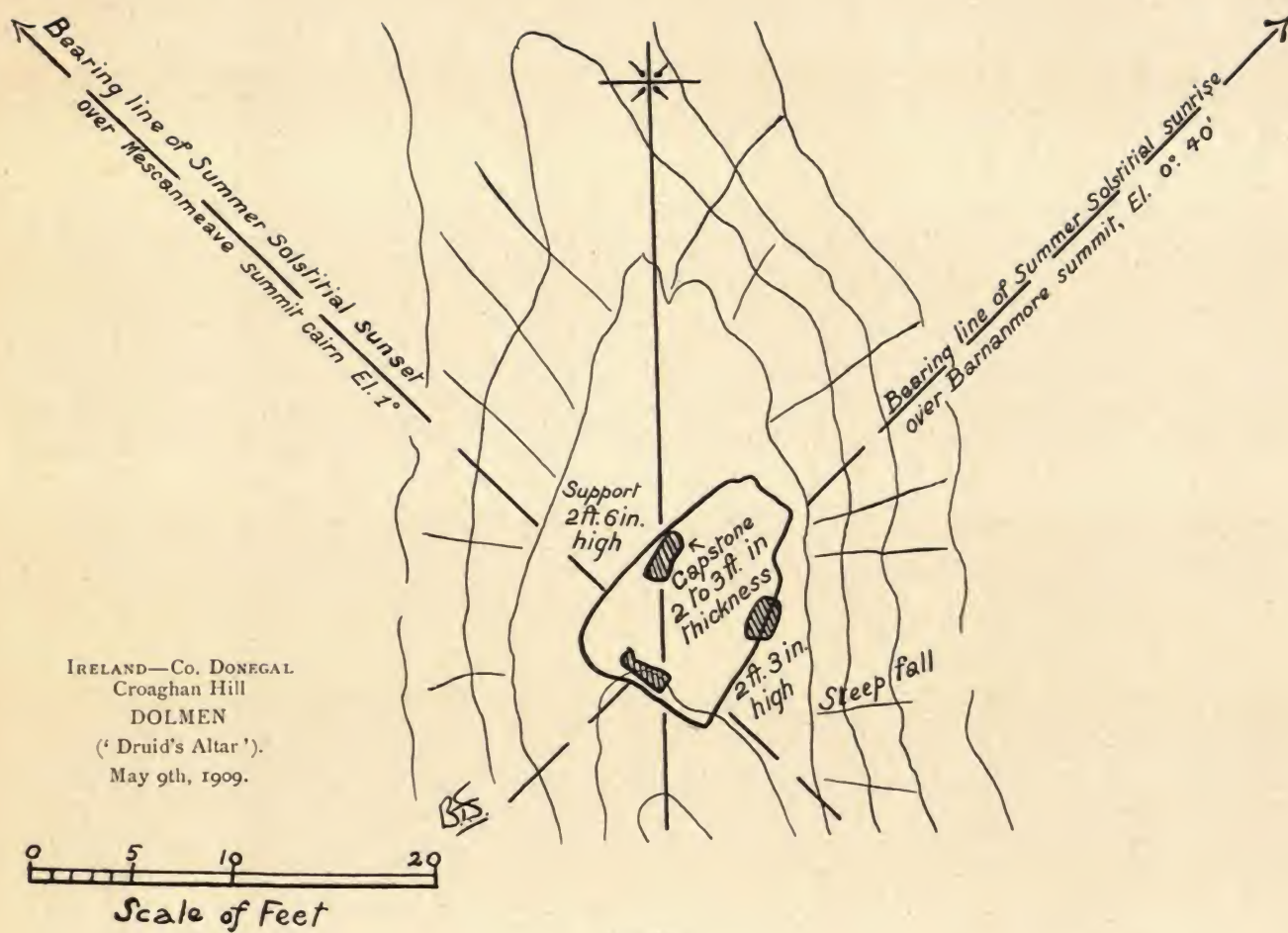
Another object of the same description as that in fig. 7 is shown in fig. 8. It is situated near Oban, at the south end of Loch Nell; and is named (probably for the sake of tourists) 'Cuchullain's Grave'. Traces of the original tumulus which covered it may be seen in the slightly elevated bank of earth which surrounds the Chamber-dolmen and an associated cist-burial, distant from it a few feet. The orientations of these two burial-places are both definite and interesting, since two different sunrises are involved.

'Cuchullain's Grave' is directed to the sunrise of Bealltaine (6th May); and the small cist-grave to that of the Winter Solstice.

The object shown in fig. 9, plan and view, is of a true Dolmen; that is, it consists of a great single stone resting on supports, but not enclosing a Chamber. In this case the supporting stones are three in number, and are of no great height. Though possibly (and even probably) this monument was in the first place intended to be a place of burial, there is only just room beneath the capstone for a body to have been laid out flat on the rock floor on which the Dolmen stands. There is no grave-cavity or depression to be seen. The monument is placed in the midst of wild mountain scenery on the crest of a narrow rocky spur of Croaghan, county Donegal, at a point about 450 ft. above sea-level. It can never have been covered by a tumulus, for which there is neither ground space on the ridge crest nor material at hand, either of earth or stones, with which to make it.

We can only wonder by what means the great slab, which must weigh about four tons, was transported to this spot; or, if it was found near by in a natural condition, how it was lifted, even so little as 30 in., on to its three supports. There is no space for the necessary leverage—if levers were used—nor for men to manipulate them, for the ground falls away steeply on both sides. We must also wonder how, besides being lifted, the great stone was directed, as is the case, towards the Summer Solstitial sunrise.

There is another orientation comprised, which, though not included in the actual structure, seems clearly to be intentional. This is an alignment towards Summer Solstitial sunset over the summit of a hill about two miles distant, named Mescan Meave. The meaning of this name is 'Meave's dish'—



(b) View from north-west.

Fig. 9. Ireland—co. Donegal—Lough Swilly, dolmen on Croaghan Hill, ‘Druid’s Altar’

Meave (spelt Medb in Gaelic) was a certain renowned Irish queen of antiquity: the name is connected also with the 'Queen Mab' of fairy literature. The hill-summit bearing her name is crowned with a large circular group of stones, undoubtedly 'prehistoric' in character, possibly suggesting the idea of a 'dish'. The fact that the bearing of this (marked) hill-summit lies upon an exact Sun orientation from the Dolmen seems to prove the connexion of the two objects.

STONE CIRCLES.

We may now pass to the consideration of another type of monument, namely, that striking form of megalithic structures known as Stone Circles.

In this case orientation lines are usually indicated by specially prominent stones of the Circle, one at each end of the particular diameter which forms the desired alignment. The alignment is often, but not always, extended by means of a Standing Stone placed at some distance outside the Circle, and by this method the eye is directed either to an unmarked but prominent hill-summit, to a pronounced dip in the horizon, or (more satisfactorily) to some megalithic structure such as a Standing Stone, or cairn, or boulder.

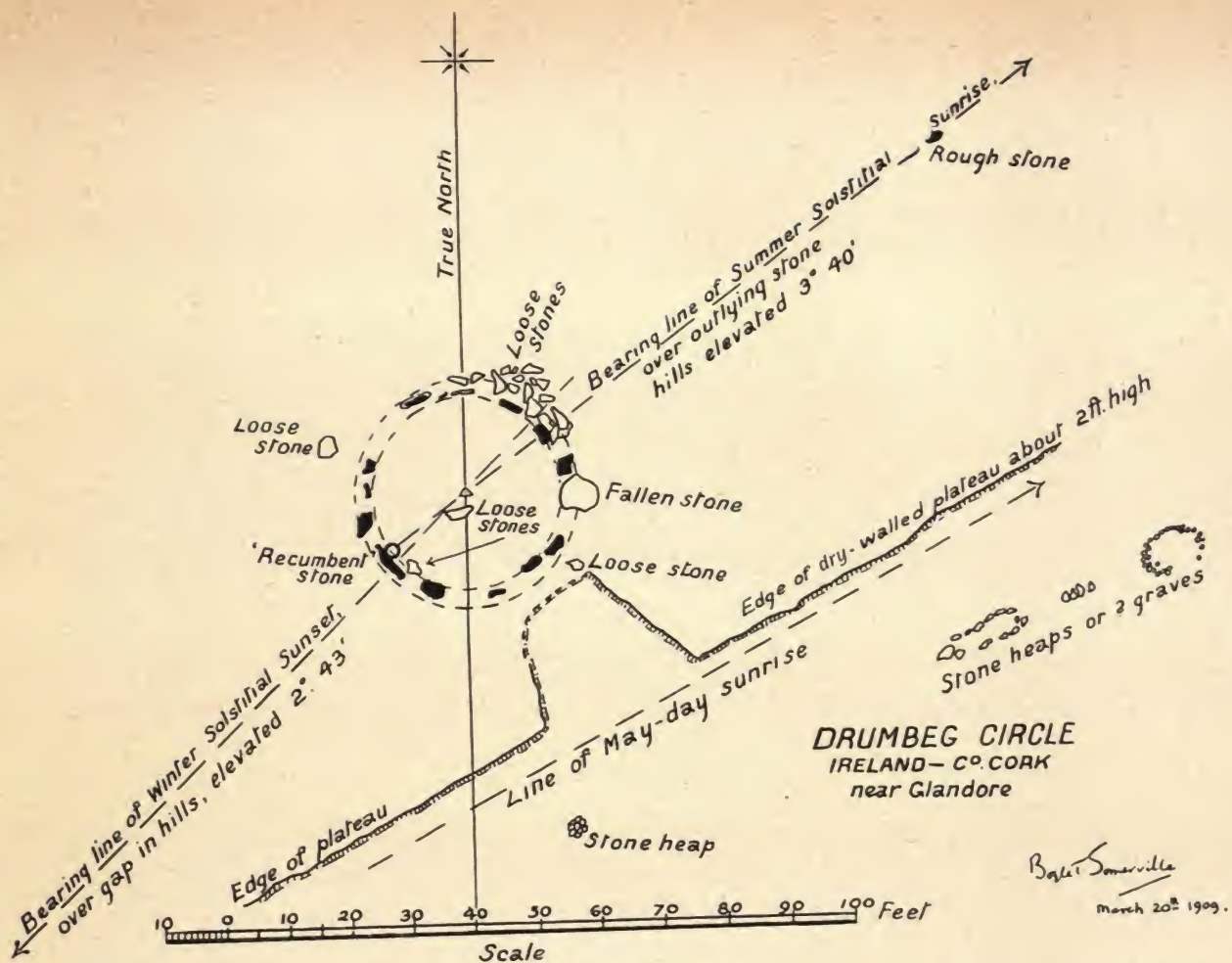
Examples of some of these will now be given.

The Stone Circle of which fig. 10, *a*, shows the plan is situated in an open grass field, amidst very picturesque surroundings in the south-west part of county Cork. The sea is in sight from it, to the southward, distant a couple of miles.

This Circle has a peculiar interest, for it is, so far as the writer is aware, the only instance that has hitherto been recorded outside the Aberdeenshire area, of a Stone Circle which contains a 'recumbent stone' (so called) in its western segment. This fact is all the more remarkable when it is remembered that the south-west of Ireland is about as remote from the north-east of Scotland as any two parts of these islands well can be.

Connected with the recumbent stone there are two different lines of orientation. One, taken from the stone itself to the north-eastward, over the highest pillar stone of the Circle to an outlying rough block of stone (probably the foundation support of a pillar stone now disappeared), to a hill-crest beyond; indicating Summer Solstitial sunrise. The other, found in the opposite direction across the diameter of the Circle, looking southward over the recumbent stone to a remarkable gap in the hills, which is the line of Winter Solstitial sunset. The photograph (fig. 10, *b*) shows this line of orientation; but does not give the true effect on the eye of the gap in the hills. This is much more remarkable and abrupt than it appears here. A telephoto lens would be required to give the correct effect.

The land surrounding the Circle slopes to the southward; and there is



(a) Plan.

Gap in hills over Recumbent stone marking winter solstitial sunset.



(b) View from north-east.

Fig. 10. Ireland—co. Cork—Glandore, stone circle at Drumbeg.

well-marked evidence of a plateau having been constructed on which to build the Circle. The edge of this plateau is defined along its southern side by dry-walling about 2 ft. in height, in which there is a sort of 'cove' directed towards the Circle. It is probably intentional that this plateau-edge is directed towards sunrise of Bealltaine (6th May). The remains of what may possibly be cairn-burials, laid out in the same direction, are to be found in the near vicinity.

Another leading instance of orientation in a Stone Circle is shown in fig. 11. This is the plan of the great Circle crowning Beltany Hill, $1\frac{1}{2}$ miles due south from the small but ancient town of Raphoe, county Donegal, in Ireland.

The somewhat rounded summit of the hill is made up (artificially) into a flat circular space, 145 ft. in diameter. The platform thus constructed is edged and defined by a circle of megaliths, of which sixty-four remain out of, possibly, an original number of eighty. The greater number are about 4 ft. high, as measured down their outer sides to the natural ground-level; while on the inner side, the tops of the stones are about level with the platform surface in the south-western part of the Circle, but stand up 1 ft. or 2 ft. clear of the platform elsewhere. There are, however, at certain points of the Circle, marked exceptions to this general height of the stones. The most noticeable of these is to the WSW., where there is a great slab, 2 ft. to 3 ft. in thickness, standing 9 ft. high, and about 8 ft. in width, in conjunction with a second considerable megalith, 6 ft. high.

Standing with one's back to the greater of these two (which is by far the greatest stone in the Circle), and looking across the diameter on which it stands, to the ENE., one sees a large and prominent stone of the Circle, triangular in shape, with its sharp apex 4 ft. 6 in. above the Circle platform. Besides its conspicuous shape, this stone is individualized by having its whole inner surface (that facing the observer) covered with cup-markings. Continuing the line of the diameter on which it stands, there is seen beyond it against the sky, at a distance of about four hundred yards, a small but conspicuous hill-summit. This is now the site of an old windmill tower; but probably had in ancient times some sufficient indication of its purpose as a point of sight—a cairn, perhaps, or a pillar stone. The azimuth of this line, in any case, is precisely that of sunrise on Bealltaine (6th May); and it is important to note that the present name, 'Beltany Hill', gives the almost exact pronunciation of the Gaelic name of this 'May Day' celebration. This seems a very convincing proof of the connexion of the Circle with the date found by orientation.

Another orientation discoverable in this Circle is as follows. In the north-western part of its perimeter there is another stone conspicuously greater and higher than its neighbours, though not so great as the Bealltaine-observing stone just described. It is 5 ft. 10 in. high, and about 8 ft. in width. Looking across the diameter on which it stands, the eye passes over a stone at the other

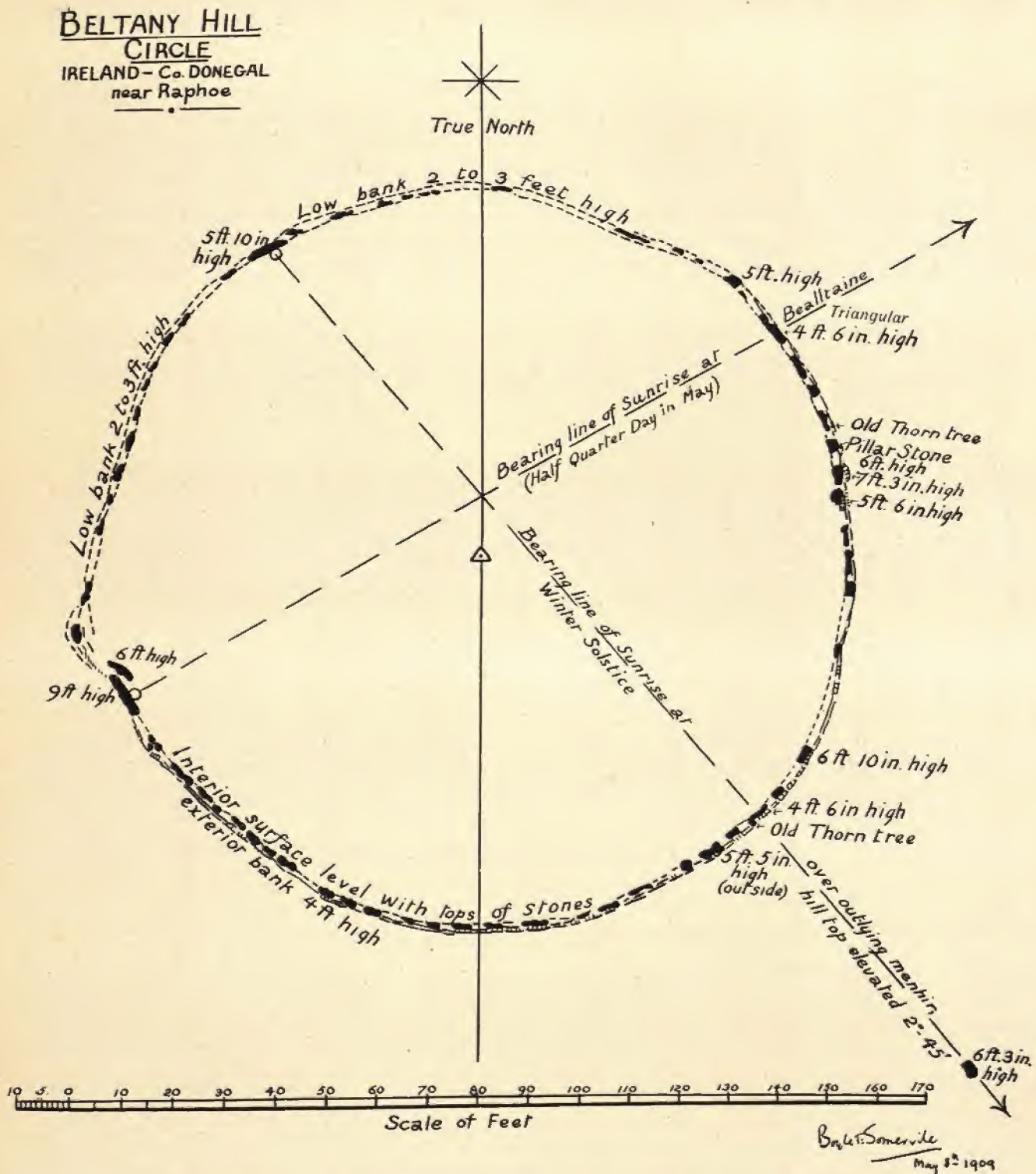


Fig. 11. Ireland—co. Donegal—near Raphoe : plan of stone circle on Beltany Hill.

end (close to which there is growing an ancient thorn-tree) to an outlying slab, or pillar stone, 6 ft. 3 in. high, which is 'planted' in the ground with its longer

sides parallel to the line of sight, at a distance of 67 ft. outside the boundary of the Circle. Beyond this pillar-stone, on the same line, there is a hill-summit seen against the sky, at some little distance. The azimuth of this line is (exactly) that of sunrise on the day of the Winter Solstice.

There is also an orientation across the centre of Beltany Circle to a conspicuous hill-summit named Croaghan, $3\frac{1}{2}$ miles distant, crowned with an ancient earthwork, clearly seen against the sky. This line is that of sunrise at Samhuin ('All Hallows'), marking the November 'half-quarter-day'; at six months' distance in time, therefore, from that of Bealltaine, in May. It is unfortunate that the stones at both ends of the diameter of the Circle on this line have disappeared. The orientation should not, however, for that reason be rejected. It is not only inherently probable, but is exact in azimuth.

Yet another orientation is found in this interesting, and no doubt important, Circle by looking across a diameter from the westward over a great slab 7 ft. 3 in. high, flanked on either side by tall pillars, each about 6 ft. high, standing on the eastern edge—the three stones standing out conspicuously among their lesser neighbours. This line directs to the sharp summit of Argery Hill, two miles distant, and marks sunrise on the day of the Equinoxes (21st March and 21st September).

ROUND BARROWS.

We may now pass to another type of structure, namely, to Round Barrows. These may perhaps be considered as cognate with Circles, in that there is generally included with them a peristalith, circular in shape, composed of either small or large Standing Stones.

Near the village of Lochboisdale, on the eastern coast of the island of South Uist, in the Hebrides, there are three Round Barrows of similar construction and size, standing in different positions on the flat moorland, which extends widely to the westward of the main hill-system of the island. The local name for these objects is 'Barp', which, pronounced 'Barr'p', is, presumably, the word rendered in English as 'Barrow'.

The three Barps are invisible from one another, and are separated by four or five miles in each case. Fig. 12 is a view of one of these barrows: the other two are almost precisely similar in appearance. They are each composed of small boulders or large stones, are from 75 ft. to 110 ft. in diameter, and stand up from 15 ft. to 20 ft. above the moor. Each is surrounded by a circular peristalith of smallish slabs, placed at intervals, of which a few remain, in each case, *in situ*. Each contains a Sepulchral Chamber megalithic in construction; but all of them are now ruined, and despoiled of their original contents. In view of the great similarity in construction of these barrows, it will suffice, in order to illustrate the remarks on orientation, to give the plan of only one of them.

Fig. 13 is the plan of that one which is placed nearest to Lochboisdale village, near the head of a small arm of the harbour, named from the barrow 'Loch a' bharp'. There are traces of an original plateau, or foundation, on which the barrow itself was built. The plateau runs in a north and south direction, and probably was necessary on account of the marshy state of the soil at this place. The small circular and oval constructions of loose stones to be seen around the foot of the barrow are stated merely to be shelters for sheep, made by modern shepherds. The position of the Sepulchral Chamber is clearly indicated.

From the summit of the barrow there is a line of orientation to sunset on the day of Equinox over a small summit marked by a 'cairn, distant about half



Fig. 12. Scotland—Hebrides—Isle of South Uist near Lochboisdale. View of Barp Frobst (showing remains of peristalith).

a mile. There are also probable orientations to the summit of Ben Shuravat, distant about $1\frac{1}{2}$ miles, due North, and to Easaval, distant $3\frac{1}{2}$ miles, nearly due South; but there is no cairn or other mark on these hills to render the orientations truly certain. There is, however, an interesting orientation to the sunrise of the day of Winter Solstice, about which there can be little doubt. This is provided by means of a large spherical boulder (fig. 14) which is seen from the Barp clearly against the sky, resting on the flat crest of a ridge of hills two miles distant—quite by itself, unmistakable, and on the exact azimuth.

It must be supposed either that the boulder was moved to this spot, or else that the barrow itself was constructed at such a point that this orientation might be fulfilled, as well as the others noticed above. This may account for the otherwise unsuitable, marshy spot at which it is erected.

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Barp Frobost (see view, fig. 12), which is distant five miles from that just described, lies on the exact Meridian line (North and South, true) which passes through the conspicuous (and cairned) summits of two hills,

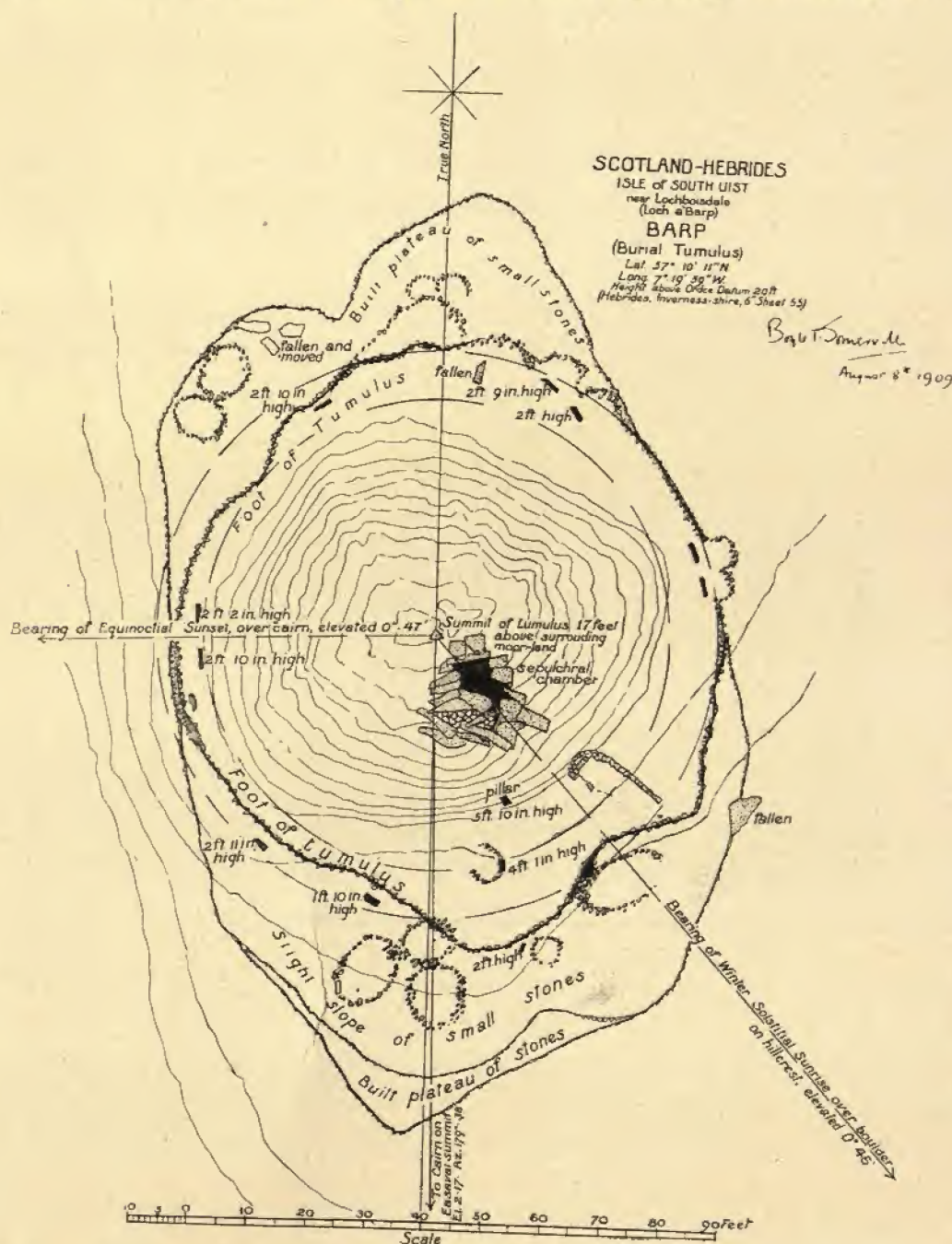


Fig. 13. Scotland - Hebrides - Isle of South Uist, near Lochboisdale (Loch a' Bharp), round barrow, 'Barp' (plan).

Reineval to the North, Askervein to the South, each distant from the Barp about a mile; while the sharp peak of Stulaval, $3\frac{1}{2}$ miles away, lies precisely on the Equinoctial sunrise azimuth.

The third barrow, North Frobost Barp, has Reineval bearing due South from its central point (the same summit, namely, that bears due North from Barp Frobost), and another orientation to the cairn on the summit of Arnaval, distant about $1\frac{1}{2}$ miles, marking Equinoctial sunrise.

It is noticeable that all three of these barrows have orientations from them to the Equinoxes; and in two of them (possibly in all three) also to the Meridian line, North and South.

THE CLAVA CIRCLES.

These instances of orientation may be concluded with those contained in the well-known 'Clava Circles'.



Fig. 14. Scotland, Hebrides, Isle of South Uist, near Lochboisdale. Boulder on hill-crest marking Winter Solstitial sunrise from Barp (Loch a' Bharp).

The small stream of the Clava runs in a valley immediately southward of Culloden Muir—the site of the famous battle of 1745—near Inverness. There is a strip of flat land along the southern bank of the stream, along which there is a series of prehistoric burial sites known as the 'Clava Circles'. Relics of at least eight of them remain; and of these, the three best preserved are those in the vicinity of a farm-house named Balnuarin. It will thus be convenient to refer to them as 'Balnuarin NE.', 'Middle', and 'SW.' respectively. They do not lie on an exact line, and though separated from each other by only a few hundred yards, are not intervisible, owing to a shrubby growth of trees. They are close to the road, which indeed passes through the SE. part of the Circle pertaining to the southernmost of these three monuments.

Their construction is somewhat unusual. It consists in each case of a Circle of megaliths, eleven or twelve in number, having a diameter of about 110 ft. Surrounding the centre of each Circle there is a tumulus, 55 ft. in diameter (namely, half that of the Circle), composed of smallish, rough stones. The tumulus, which is concentric with the Circle, is definitely outlined by a circular edging of (perhaps) trimmed stones, not very large, and mostly oblong in shape. A space of about 27 ft. in width thus exists all round between the foot of the tumulus and the surrounding megalithic Circle.

In the centre of each tumulus there is a Chamber, roughly circular in plan, shaped somewhat like a well, and 5 ft. or 6 ft. deep—a measurement which marks the present height of the best-preserved tumulus. No doubt there was originally a covering capstone to the 'well', with the stones of the tumulus heaped high over it; but this has, in each case, disappeared. The Chambers are faced internally with 'dry-walling', and each has an alley leading into it, through the thickness of the tumulus, from the south-westward. The Ordnance map of the locality has a reference that 'Urns and burnt bones' were found, but without giving a date, or more precise evidence as to any particular site.

Fig. 15 is a plan of the NE. Circle. It is in most respects the best preserved, and may serve as representative of all three. In the case of the Middle Circle, the tumulus is much ruined, and the central Chamber with its alley has disappeared; but no doubt they were of the same character as those of the companion barrows.

In order to exhibit more clearly the remarkable similarity of the character, of the dimensions, and particularly of the orientation of these three monuments, they are shown on fig. 16, all plotted together, overlying one another; the connexion between them being made by causing the three central points, and the True Meridian running through them, to coincide.

The stones composing each barrow are distinguished from those of the other barrows through those of the NE. being shown in solid black; those of the Middle, in outline only; and those of the SW. shaded with diagonal lines.

Examination of this 'composite' presentation of the three plans reveals that the only constructional differences to be noted lie (1) in the actual numbers of megaliths originally forming the Circles (but this must be to some extent conjectural, since some are missing), and (2) in the characters of the stones themselves.

With regard to the *numbers* of which each Circle was composed, if the distances between individual stones should be the same all round, then the NE. Circle and the SW. Circle probably contained twelve stones each (of which two stones and three stones respectively have disappeared), while the Middle had eleven stones (of which four are now missing). In spite of this disparity in numbers, it is observable that, in the southern segments, the positions of the

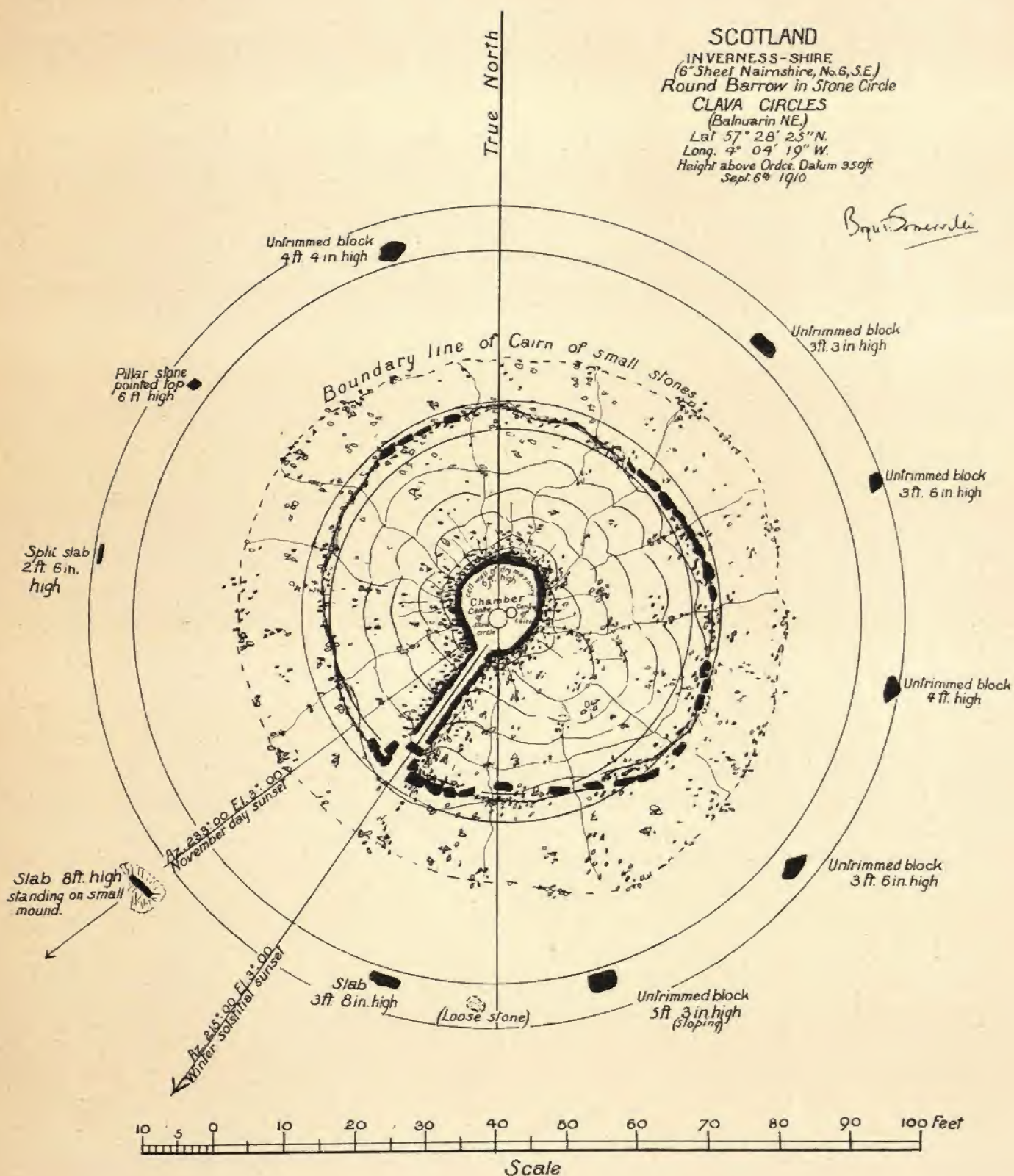


Fig. 15. Scotland—Inverness and Nairn—Clava, round barrow. Balnuarin NE., 'Clava Circles'. Plan.

stones of all three Circles have been made identical, or nearly so; the (inevitable) differences being confined to the northern segments.

With regard to the *characters* of the stones, the strange fact to be noted is that, in the NE. Circle, if a line N. 20° W. – S. 20° E. be drawn, the stones to the eastward of that line are all rough, more or less rounded, untrimmed lumps—possibly boulders from the river bed; while those to the westward are either well-trimmed, flat-sided slabs, or else are pillar-stones.

In the Middle Circle, one untrimmed lump remains at the NNE. point; and of those that remain, all are trimmed slabs.

In the SW. Circle, there are no untrimmed lumps; and the NNE. point is marked by two separate slabs, with a space between them of about 1 ft., the faces being parallel.

What these differences may signify—and certainly they seem intentional—it is not possible to say. Another point that requires noticing, as it has a decided bearing on orientation, is as follows. In each Circle there is one stone slab, larger and better trimmed than the remainder, which is given special importance over the remaining stones of the Circle. In each case it is placed in the SW. portion of the perimeter. In two cases (NE. and Middle Circles) the stone is rendered conspicuous through being surrounded by a small mound; and in the case of the NE. Circle, the slab is rendered, literally, *hors concours*, by being placed a little outside the Circle of the remaining stones. It is obvious that the stones in question are intended to mark some special point. The lines of azimuth passing through these stones from the centre of each Circle are absolutely identical; and on investigation it is seen that their direction is to sunset on Samhuin—‘All Hallows’—the ‘half-quarter-day’ of November.

In the case of the SW. Circle, a second stone, additional to that referred to above, is made prominent by being placed on a small mound. This stone lies on the azimuth (taken from the centre of the Circle) of sunset on the day of the Equinoxes.

The last point to notice is the exact identity of bearing of the alley leading from the central burial-chambers in the tumuli of the NE. and SW. Circles, and probably also from that of the ruinous Middle Circle, if we may judge from the one stone of it remaining *in situ*.

The azimuth on which these alleys lie is precisely that of sunset on the day of the Winter Solstice.




There could scarcely be a more convincing proof of the existence of orientation than is contained in these facts and coincidences. These Circles and tumuli were all probably constructed at about the same time—possibly they are the silent witnesses and monuments of prominent persons killed in the same battle, and contained their (cremated) remains.

This would account for the precise correspondence in design and in

SCOTLAND
INVERNESS-SHIRE
(6" Sheet Nairnshire, No 6, S.E.)

CLAVA CIRCLES

Plans of the three Balnuarin Circles and Cairns, superimposed by their central points and by the true Meridian passing through them, in order to illustrate their identity of design, dimensions & orientation

Stones composing N.E. Circle shown thus 
" " middle Circle " " 
" " S.W. Circle " " 

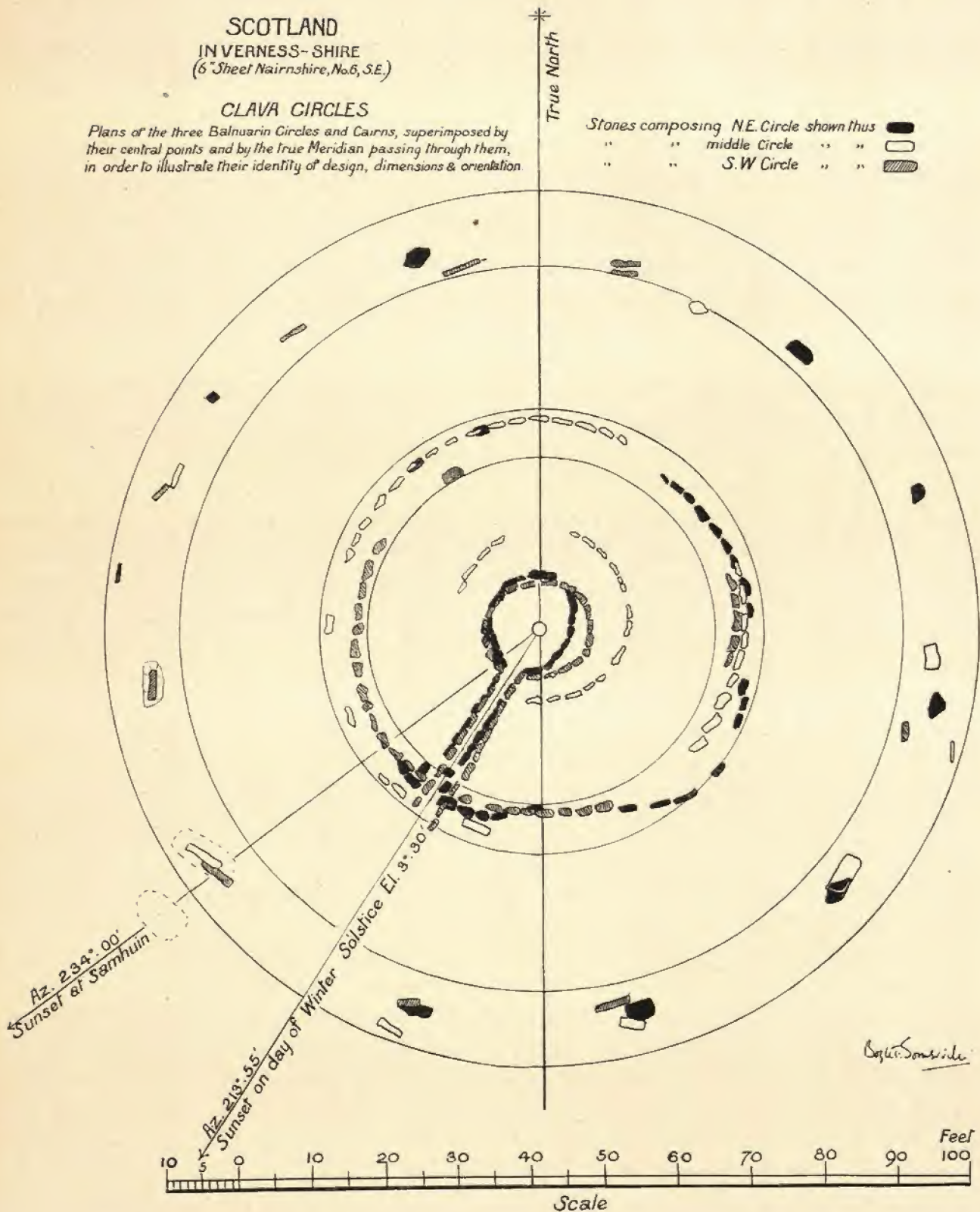


Fig. 16. Scotland—Inverness and Nairn—Clava, round barrows. Composite plan of Balnuarin NE., Middle, and SW. barrows ('Clava Circles').

actual ground measurement found in these monuments. There is also precise correspondence in their orientation; and we can only infer that this, too, was intentional, and could not possibly be the result of mere chance. The fact that the azimuths involved direct to definite points of the horizon—to the lines of sunset at certain dates found in the orientation of many other prehistoric monuments—cannot be mere chance either. The real reason why these particular dates should have been chosen, however, eludes us. We do not yet know their purpose and origin, except by conjecture.

In the preceding paragraphs there have been brought before the reader five different types of megalithic monuments, and several examples of each type, in which there is undoubted evidence of exact orientation to certain definite points of the horizon (those, namely, set forth under fig. 1 at the beginning of this paper); such orientation being conveyed either in the ground-plan of each monument, in its geographical surroundings, whether artificially marked or not, or by both methods.

This is an initial contribution to the study of the subject, and contains merely leading and obvious examples from the collection of about ninety surveys of separate megalithic monuments made by the writer. The time has not yet arrived to state definitely that orientation of some kind, solar, stellar, or lunar, is to be found in *all* such structures; but in every instance in the above-mentioned small collection, where the ruined remains have been sufficiently extensive to justify a deduction of any sort, orientation of one kind or another has been found.

Only the fringe of the subject has as yet been touched, but the results seem sufficiently promising to continue the experiment, and to justify the plea that, when surveys of megalithic remains are made, they shall be scientifically exact in their ground-plan, and that this shall include the projection of the True Meridian on the plotted result.

A further plea is urgently advanced that in all published results of such surveys, the plans shall be presented under the same convention as that adopted by the whole modern world for maps and charts; that to which every one is accustomed from his youth up—namely, with the north end uppermost on the paper, and with the Meridian line parallel to the edge of the book, etc., in which it appears.

Only when the north and south line (true) lies in the same attitude on all plans is it possible to see at a glance the correspondence or otherwise of orientation between any two of them. What should we say if, in order to fit the coast-line neatly into the page of an atlas, and so save paper, the map of the British Isles were inserted either with Scotland thrust down into the lower left-hand corner of the sheet; or with the south coast of England laid closely

parallel with the right-hand border of the paper—with a small and unobtrusive arrow inserted to indicate the actual direction of the North Pole, true or magnetic? Yet this is what we are accustomed to in most scientific journals, in the matter of structural plans, and have borne with it hitherto without complaint.

It is not contended that the discovery of orientation will unlock all the secrets of these ancient ruins, concerning whose origin we know so little at present, but it will at least be one more fact to add to our scanty stock of knowledge regarding them; and perhaps may prove to be a more potent factor towards their elucidation than appears at first sight.

Quite large questions lie behind what, seemingly, is a small matter. Where did this world-wide custom of orientation originate? What was its purpose? Who introduced it into these islands? How was it carried out in practice?

If by direct observation of the rising or setting of the heavenly bodies, as in view of the exactitude of the azimuths seems to be certain, how was this possible, unless the British climate of those times was greatly different from that of to-day?

This consideration brings us into the large question of glaciation, and of the weather conditions that must surround regions covered with an ice-cap. All of these questions, borne in the lap of archaeology, arise out of the closer study of orientation in prehistoric structures, and all require answers.

DISCUSSION.

MR. REGINALD SMITH favoured the theory that the orientation of megalithic monuments depended on Sun-worship, as the solar year was more important than the lunar month to those who had learnt agriculture from the people who introduced the dolmen idea into Europe. The orientation of the stone chamber of a long barrow, parallel to an adjoining avenue or group of standing stones, was less easily explained, as the chamber was at once covered by the mound, even if the largest capstone remained visible. The stock objection to Sir Norman Lockyer's theories was that if the orientation had no relation to the solstitial or equinoctial positions of the sun on the horizon, some prominent star was called in to explain the direction of a monument, and the choice seemed somewhat arbitrary. It had been mentioned in the paper that one enormous slab on low supports had never been covered with earth; and it seemed likely that the stone was *in situ*, also that it had been hollowed out underneath for the supports, as the transport of such a weight up a mountain seemed unnecessarily laborious. Whatever the quality of the British climate in the late Neolithic period—and more than one of the classical historians gave it a bad character—it would only have been necessary to fix the critical solar positions on the horizon on one or two occasions, and those occasions could be waited for. Mention had been made of the late Mr. A. L. Lewis's researches on the same lines, and his independent calculations led to the same conclusions as those reached by Admiral Somerville, who had evidently made good use of his shore-leave when stationed at Lough Swilly and Berehaven.

MR. R. C. FOWLER asked if the author had ever observed a good enough line for stellar orientation. The solstitial points could be easily determined, but how were the equinoctial points found by such primitive methods?

Mr. LELAND DUNCAN inquired whether the solstitial lines shown on the screen were valid at the present day, or only for the period in which the megalithic monuments were erected. He had no doubt that some of them were connected with fire or Sun-worship; and the practice of lighting a fire on St. John's Eve and All Hallows Eve was still kept up in the west of Ireland. In Leitrim people used to light a small fire on the hill-top at Midsummer to assist the sun to continue on its path, instead of turning back from the solstitial point.

Rev. G. H. ENGLEHEART said it was difficult, and sometimes invidious, to adopt a negative attitude when an elaborate paper had been read to the Society; but sincere criticism was one of the functions and privileges of the Fellows, and he thought it was allowing too much latitude to choose any one of five points of sunrise or sunset on either side of the monument to suit the lines still furnished by the standing stones. If stars or adjacent eminences were admitted as objectives, it would be easy to explain any line so given, but such a method did not carry conviction. It was a suspicious circumstance in Sir Norman Lockyer's system that when the sun did not explain the orientation of a stone circle, one star or another was adopted in its place. The explanation he preferred was that offered by Sir Arthur Evans in his last presidential address (*Proceedings*, xxxi, 192). He himself saw in the three Clava monuments a connexion with the primitive chamber and the primitive house of the living. It was a habit ingrained in the northern nations to turn their houses towards the sun, and the Laplanders had a buried avenue leading into their dwelling-room. That to his mind was the origin of megalithic orientation. To explain the alignment by astronomy seemed to him imputing to primitive man a vast amount of scientific knowledge. He felt sure the British climate was then much worse, and pictured the builders waiting year after year for a clear observation of the horizon on the critical day.

Mr. LYON THOMSON was stationed at Lark Hill, two miles from Stonehenge, during the war, and noticed that one hut in a row was missing, though the foundations were laid. Inquiry showed that a hut had originally been built there for forty men, but had been demolished as it would have prevented the midsummer sunrise being seen from Stonehenge.

ADMIRAL SOMERVILLE agreed in reply that Sir Norman Lockyer had made too free use of the stars to explain various orientations; and such use was only justified in the case of heliacal risings, that is when a star rose just before the sun on one of the critical days and gave warning to the observers: thus the Pleiades heralded sunrise on May morning. The stars or star-groups suited for that purpose could be reduced to three or four, and only those had been used in his own calculations. The burial of an orientated chamber in a long barrow was as logical as the east-and-west position of many Anglo-Saxon burials that had left no traces on the surface above them. The great slab on the mountain side of Croaghan, co. Donegal, might have been of local origin, but its transport to the spot was not out of the question. As to the early British climate, Mr. C. E. P. Brooks in his *Evolution of Climate* had contended that there was an optimum between 4000 and 3000 B. C., with a continuous decline since that date. He had found Mr. A. L. Lewis a rich source of information with regard to megalithic monuments, and considered him one of the pioneers in the subject. To find the solstitial points was an easy matter, and the equinoctials were probably fixed by counting the days between the solstices and dividing by two. The difference in sun-rise bearing at Stonehenge due to precession was negligible, as it only amounted to 13' 49" in a thousand years. He did not accept terrestrial bearings such as hill-tops in his own observations.

IX.—*Excavations at some Wiltshire Monasteries.* By HAROLD
BRAKSPEAR, Esq., F.S.A.

Read 14th December 1922.

WILTSHIRE had at the Suppression fifteen religious houses, of which six were of over £200 a year value and escaped the first attack by King Henry VIII. One had licence to continue. With the exception of five they were all in the northern half of the county, and six were in the Avon valley between Bath and Malmesbury.

It has always been the hope of the writer to deal with this group in detail as he was able to do with three of them, Lacock, Stanley, and Malmesbury; but time passes, and it does not seem likely that opportunity will arise for any extensive excavations to be made on the sites except perhaps in one case. Therefore, so that the researches already made may not be altogether lost, this paper is laid before the Society with a very sincere apology for its incompleteness.

BRADENSTOKE PRIORY

The priory of Bradenstoke is placed, in the unusual position for a monastic house, on the top of a hill on the east side of the Avon river some six miles north-east of Chippenham. The remaining fragment of the priory can be seen from a great distance, and the view from it extends over three counties. In spite of the elevated position, the indispensable necessity of every monastery, water, wells up within the precinct in vast quantities that have never been known to fail.

The priory was founded in 1142 by Walter of Salisbury, for canons of the order of St. Augustine, and was hallowed in honour of our Lady.¹ The eastern part of the church and the buildings round the cloister were doubtless erected with little delay. The house was richly endowed by the founder, who, after the death of his wife, became one of the canons. He and his wife were buried in

¹ *Mon. Ang.* (London, 1849), vi, 337.

the same grave *juxta presbyterium*. His son William, who was father of Ela, countess of Salisbury, founder of Lacock Abbey, was buried with his wife Elinor under a marble slab *juxta vestibulum*.¹

In the thirteenth century a new aisle and porch were added to the nave of the church, after which the claustral buildings seem to have been rebuilt, and this rebuilding was continued gradually until the completion of the western range in the early part of the fourteenth century. The great barn was built at the end of that century.

A western tower was added to the nave at the end of the fourteenth or the beginning of the fifteenth century. Later in the fifteenth century a chapel was added on the south side of the nave, east of the porch. The prior's lodging was remade by Prior Thomas Walshe about 1490.

In 1535 'the king's visitors' came to Bradenstoke 'where after exact and diligent inquisition we coulde not prove any cryme ageinst the Prior but ij or thre of the convent were found convict of incontinencie'.²

The house was valued at £270 10s. 8d., so it escaped the suppression of smaller houses only to share their fate four years later, on the 18th January 1539, when there were thirteen canons and a prior.³ The prior, William Snow, was appointed first dean of Bristol by the charter founding that see on 4th June 1542, and it is interesting to find that the head of another Wiltshire house, Edington, was made the first bishop.⁴ Bradenstoke was granted to one William Pexhill in exchange,⁵ and since then has passed through many hands.

John Aubrey, the Wiltshire antiquary, was familiar with the remains of this priory as they existed in his day, and it is a pity he says so little about them. In his collections the references are very slight, and most of his short notes refer to wild ideas of the name of the place which is known locally as Clack. However, he tells us,

At Broadstock Abbey is an overshot mill. . . . Broad-Hinton House, Bromham House, and Cadnam House were built of the Ruines of Bradstock Abbey. The two former were burnt in the late Warres and Cadnam is propt for fear of falling.⁶

In his *Natural History of Wilts*⁶ he says:

The cellar, in which was a strong spring of water, the stateliest in Wilts. The church had long been destroyed and the foundations digged up. On the west of the hall had once been the King's lodgings which stood till 1588.

¹ *Register of Lacock*, B.M. Cott. Vit. A. viii, vide *Mon. Ang.*, vi, 501.

² *Letters and Papers, For. and Dom.*, Hen. VIII, ix, 139.

³ *Mon. Ang.*, vi, 337.

⁴ *Survey of Cathedrals*, Browne Willis (London, 1727), 777 and 784.

⁵ *Wiltshire Collections*, Aubrey and Jackson (Devizes, 1862), 186 and 189.

⁶ *Ibid.*, 187.

In 1732 the first known view of the place occurs in the collections of the brothers Buck and is of great value. It shows the western range complete to its northern gable and the porch remaining to the guest hall. The prior's lodging is also shown complete with a buttress of the church adjoining it to the south. The northern bay of the range was pulled down in the seventeenth century but the western wall was left standing. The prior's lodging was pulled down early in the nineteenth century and replaced by a two-storied building. The fireplace remained until about 1870 and was then removed to Corsham Court.

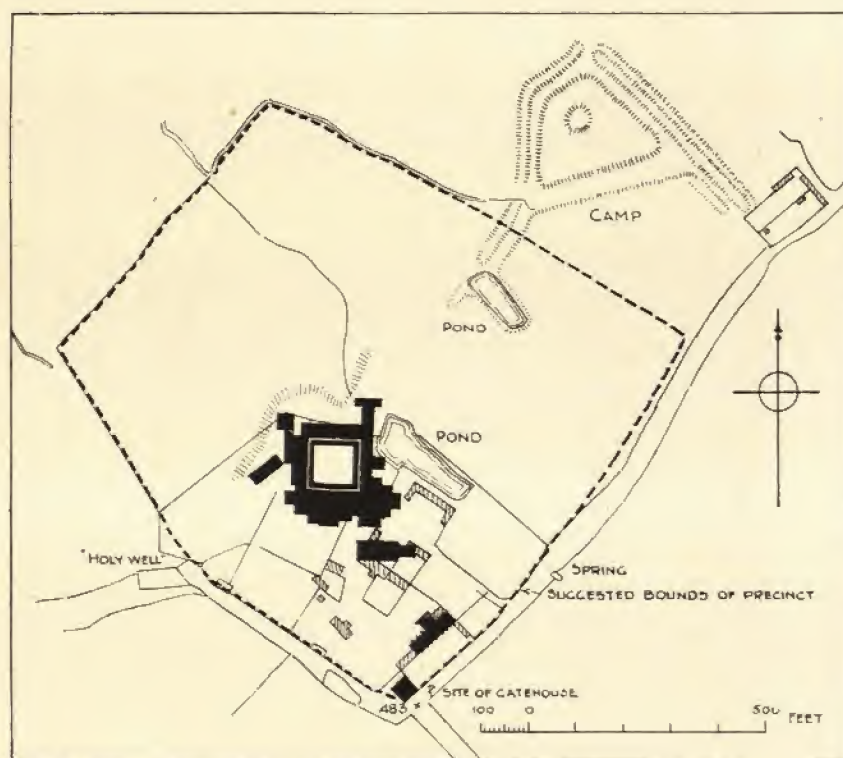


Fig. 1. Bradenstoke priory, plan of precinct.

In 1917 the property was bought by the Baron de Tuyle, who intended to erect new buildings to form a large house, and during his ownership excavations were made on the site of the nave of the church and the northern range of the cloister under the direction of the writer. It is to be hoped that at some future time the remaining parts of the site may be uncovered.

THE PRECINCT.

The bounds of the precinct are nowhere clearly traceable either by ditch or wall. The gatehouse was probably to the south-west of the great barn (fig. 1).

THE CHURCH.

The church occupied the south side of the cloister in spite of the site being virtually level from north to south. It is a curious coincidence that of the six monasteries along the Avon valley in Wiltshire four have their churches on the south side of the cloister, namely, Malmesbury, Bradenstoke, Stanley, and Lacock.

Canons' churches are notoriously varied on plan, and it is useless to suggest the nature of the eastern part of that at Bradenstoke until it has been traced by excavation.

The nave has been carefully examined, and Aubrey was perfectly correct in saying that the foundations had been grubbed up. A few fragmentary bits of foundation remained, but the greater part had been removed. This, however, does not mean that they could not be traced. It must be remembered that when a building was first erected on a clear site trenches were cut in the untouched ground to receive the footings of the walls, and if the line of the unmoved ground is carefully followed it is possible to trace the complete area of the foundations. This method was adopted and the result has been the discovery of an interesting and unexpected group of buildings.

The nave was approximately 126 ft. long by 24 ft. wide between the foundations, or about $25\frac{1}{2}$ between the neat work, and was originally aisleless. The foundations of the south wall, $6\frac{1}{2}$ ft. wide, remained for almost the whole length of the nave. The reason why they were not removed like the rest was that they formed a sleeper-wall under the main arcade, and their existence was not suspected. The foundations of the west wall were 9 ft. in thickness.

In the thirteenth century an aisle was added on the south side of the nave, $8\frac{1}{2}$ ft. wide between the foundations or $10\frac{1}{2}$ ft. wide in the clear of the walls. The foundations of the outer wall were 7 ft. wide and had offsets on the inner face to carry the vaulting shafts. These offsets show that the width of the bays was only $12\frac{1}{2}$ ft.: on the outside face were large projections for buttresses.

The nave was divided into ten bays, but it is doubtful if the arcade was continued up to the crossing. If the quire occupied the eastern part of the nave, as was usually the case, the arcade was doubtless stopped before it reached the quire, as it did at Haughmond and Torre. The foundation of the west end of the aisle was not so wide as that of the original nave, and there was a large block of foundation 10 ft. square at the south-west angle to take a vice.

Opposite the eighth bay from the east was a large square porch of the same date as the aisle, with square buttresses at the angles.

The nave and aisle were paved with pattern tiles of fourteenth-century date

which were found at about $2\frac{1}{2}$ ft. below the present ground. They were much shattered by fallen débris and frost, and no definite arrangement was traceable in those parts which were exposed. All that were found were of two variations of a four-tile pattern of quatrefoils. In 1851 other tiles were found on the site of the church; on some were the arms of the de Clares and on the others the arms of Hungerford, and some of these were removed to pave the porch at Dauntsey Rectory.¹ Stone coffins were also found, and for many years were kept as objects of curiosity.

Late in the fourteenth century the great abbey of Malmesbury built a new west tower, and at Bradenstoke, whether in emulation of its richer neighbours, or because its own central tower showed signs of weakness, a new tower was added at the west end of the nave. The foundations of the south wall remained, $6\frac{1}{2}$ ft. wide, but the other sides could not be traced. The tower was about 30 ft. square over all.

On the south side of the nave, outside the fifth, sixth, and seventh bays, a chapel was added presumably in the fifteenth century. This was about 33 ft. long by 16 ft. wide and had small buttresses on its south side dividing it into only two bays, which shows that the chapel probably had a wooden roof.² The original ground in the north-east part of the chapel had been disturbed, possibly for burials, but a square sinking at the east end may mark the foundation of the altar. Eastward of the chapel was a narrow building, occupying two bays of the aisle, which may have been a vestry in connexion with the chapel.

In Buck's view the buttress at the north-west angle of the nave is shown standing to a considerable height and had upon it an attached shaft with capitals and springers of wall arcading, indicating that the original west end had considerable architectural pretensions.

THE CLOISTER.

The cloister was approximately 110 ft. square, but nothing has yet been found of the foundations of the inner walls of the surrounding alleys. The weathering remains on the western range of the lean-to roof of the western alley.

THE EASTERN RANGE.

The eastern range of buildings usually contained the chapter-house and the canons' dormitory, but nothing of it has yet been excavated, except a short length

¹ *Wiltshire Collections*, 188.

² At Lacock a Lady chapel was added in the fourteenth century on the south side of the church of only two bays but occupying three bays of the earlier work.

of the wall next the northern range. This had the beginning of a cross wall in line with the north wall of the cloister and a buttress-like projection some $17\frac{1}{2}$ ft. farther north.

In connexion with the dorter was the rere-dorter, and the position of this is indicated by the present outlet of the pond. The pond was used as a dam from which the water was drawn periodically to flush the drain.

THE FRATER.

The northern side of the cloister was covered by the frater, over a subvault in the usual manner, but had in addition another building at its east end without a subvault. Owing to the hard nature of the subsoil in this part of the site the foundations were not carried down to any depth and nothing definite was discovered of this eastern building. At the canons' house of Lilleshall in Shropshire is a similar building at the east end of the frater, and there it certainly was the warming house, which it doubtless was at Bradenstoke.

The frater subvault was traced and it was $75\frac{1}{2}$ ft. in length by 25 ft. wide. It was divided down the middle by a row of columns and was six bays in length. The vaulting was carried on the side walls by semi-octagonal half-piers $15\frac{1}{2}$ in. wide with chamfered plinths. Portions of the subvault were found standing some feet above its floor level, particularly at the west end of the north wall, the east end, and the eastern part of the south wall. The foundations of the side walls were 5 ft. wide and those of the west wall 7 ft. wide. It dated apparently from the end of the thirteenth century, and seems to have had buttresses on the north side marking the bays. In the westernmost bay was a coffin embedded in the floor for use as a water-trough. The west end of the frater overlapped the north end of the western range in the same way as it did at Croxton.

WESTERN RANGE.

The western range, with the exception of the northernmost bay, remains complete with its roof, and the west wall stands to its full length (pl. xxxi, fig. 1). It all dates from the fourteenth century and was built over a subvault. This subvault was 92 ft. long by $23\frac{1}{2}$ ft. wide; it was seven bays in length with a row of octagonal columns down the middle. The four southern bays were divided from the rest by a couple of arches to carry a wall above. These had half-octagonal responds of which the easternmost remains complete. The three southern bays retain their vaulting, which has bold semi-octagonal ribs supported on the walls by heavily moulded corbels (pl. xxxi, fig. 2). The remainder of the vaulting has been destroyed with the exception of the springer and corbel on the west wall of the first bay of the northern half.



Fig. 2. Bradenstoke Priory. South end of western range



Fig. 1. Bradenstoke Priory. North end of western range

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Fig. 1. Bradenstoke Priory. West side of western range



Fig. 2. Bradenstoke Priory. Subvault of guest hall

In the west wall of the first and third bays from the south are remains of the original windows, which were square-headed with pointed relieving arches above (pl. xxx, fig. 2). In the fourth bay are remains of an original doorway (pl. xxxi, fig. 1). In the sixth bay is a large pointed doorway of two hollow chamfered members with a hood-mould, and in the last bay is a similar doorway, at a slightly higher level, which is now blocked up with masonry (pl. xxx, fig. 1).

Over the four southern bays of the subvault was the Prior's hall for the entertainment of superior guests. It was 51 ft. long by 24 ft. wide, and was lighted from the west by three large two-light windows having pointed heads and transoms. The southernmost window is larger than the rest to give extra light to the dais. In the fourth bay are the remains of the entrance doorway which had detached columns in the jambs, but the arch is destroyed and the whole is built up with masonry.

There is no indication of a contemporary fireplace, so that in monastic times the fire would have been on a centre hearth with a louvre in the roof.

The hall was covered by a fine open timber roof divided into four bays with arched principals, having mouldings on the edges enriched with ball flowers. In the fifteenth century the hall seems to have been ceiled with a flat wooden ceiling of which part remains at the south end; but it is possible that this ceiling never extended beyond the bay over the dais.

Externally the bays are marked by buttresses having two sets-off and bold plinths, which show that the original ground level was higher than it is at present. The building is capped by a low parapet supported on a corbel course. Projecting from the west wall, in line with the north end of the hall, is a square turret which contained garderobes at the first and second floor levels.

The hall was approached by a flight of steps up to a projecting porch opposite the fourth bay. The weathering of the apex of its roof remains in the parapet but all else has been removed. The porch is clearly shown in Buck's view and consisted of a stone basement in which there was a two-light window in the west wall and a smaller two-light window in the north wall. Over this was a timber structure, forming the porch itself, with a gable placed east and west. The stairs remained on the south side.

The portion of the western range northward of the hall had two stories above the subvault (pl. xxx, fig. 1). The storey level with the hall was very low, being only $7\frac{1}{4}$ ft. from floor to ceiling. It was lighted on the west side by a pair of two-light square-headed windows in each bay and was probably divided up into cubicles for superior guests. The storey above has a large two-light traceried window with a segmental head in each bay, and Buck shows a large two-light pointed window in the north gable. The room was apparently

a common sleeping room for guests. One bay remains of the original roof, which is of similar character but slightly different in detail from that of the hall.

At the north-west angle of the range is a large square turret containing a vice which starts at the first floor and connects it with the second floor, after which it continues up to the gutter of the roof (pl. xxx, fig. 1).

Outside the two northern bays was a pentice, over the two doorways from the subvault, of which the weathering remains under the first floor windows, and the sloping weathering from this survives on the middle buttress and the angle vice.

THE KITCHEN.

The kitchen was doubtless arranged to the northward of this pentice so as to be conveniently placed for serving the frater and the guest hall.

THE PRIOR'S LODGING.

Between the south end of the guest hall and the church was a building, 20 ft. from east to west, by 12 ft. wide. It is clearly shown in Buck's view and consisted of three stories. The bottom storey had a pointed doorway in the middle of the west wall and was the outer parlour and cloister entry. In the north wall is a moulded and pointed doorway that has a flight of steps to the subvault. The storey above was known as the Prior's room until its destruction, and there is no question that this was its use. In the west wall was a large eight-light window with two transoms and tracery in the head under a flat lintel. In the string-course under this window was a series of arms and badges¹ which have been preserved by being built into the present building occupying the site.

These consist of:

- (1) A shield bearing a cross charged with five roses, for Thomas Langford, bishop of Salisbury from 1484 to 1493.
- (2) A large letter *Ƨ*.
- (3) A rebus with the letter *Ƨ* under a wall from which issues a tree.
- (4) A rebus as the last but without the letter. These three devices are commemorative of the prior who built the window, Thomas Walshe. The rebus being a wall and ash-tree.
- (5) A shield bearing the leopards of England.

¹ These are shown in Buck's view beginning at the north end: (1) Rebus. (2) Cross and roses. (3) France and England. (4) Checky. (5) Three feathers. (6) Rebus. (7) Leopards of England. (8) Blank. (9) Three pales vair in chief a leopard of England.

- (6) A shield bearing France (modern) and England quarterly.
- (7) A shield with three feathers per pale.
- (8) A shield bearing three pales vair on a chief a leopard of England, said to have been used by Patrick, the son of the Founder.



THE PRIOR'S ROOM, BRADENSTOKE PRIORY, WILTS.

Fig. 2. Bradenstoke priory, the prior's room.

Reproduced, by permission, from the Builder.

Inside the room was a large fireplace which is shown in position in a sketch published in *The Builder* for 1849¹ (fig. 2). It was afterwards taken down and removed to Corsham Court, where it was used for the fireplace in the billiard-room; but it has recently been returned to Bradenstoke. The fireplace was 6 ft. wide with a very flat arched head, the stone of which is richly decorated

¹ Vol. vii, p. 387, August 18, 1849.

with two rows of traceried panelling. The top row consists of five foliated quatrefoils with shields in the middle of each, but none is carved with charges. The bottom row has six lozenge-shaped panels with foliated quatrefoils and large carved bosses in the middle of each, on which are the letters *Ƨ. W. A. L. S. Ƨc.* These letters have been noticed by more than one writer, but it does not seem to have occurred to them to read the letters into the simple T. Walshe, the name of the prior who built the room. Buck shows that there was a high octagonal chimney over this fireplace. On the east side of where the fireplace stood was a moulded and pointed doorway.

Buck shows that there was another storey over the Prior's room which had a gabled roof placed east and west, and there was a large transomed window in the west end. The gable was set back from the wall face below and seems to have been of timber construction. Even with this added storey the Prior's lodging was very small for a rich foundation, but there may have been other chambers and a chapel over the south alley of the cloister like the abbess's lodging at Lacock.

The reference by Aubrey to the king's lodging to the west of the hall is interesting as showing that the remaining buildings were not all that formerly existed for the entertainment of guests. Nothing is known of the date of this lodging, but in connexion with it may be mentioned that King John visited the priory nine times and King Henry III in 1223.

A necessary building in connexion with all monastic houses was the infirmary, the position of which at Bradenstoke is very uncertain. It was generally to the east of the cloister, but that position is occupied by a large pond which seems to have existed in monastic days. At Haughmond it was parallel with the frater, but this could not have been its position here as there is a sharp drop in the ground just northward of the northern range. At the White canons' house of St. Agatha in Yorkshire it adjoined the church on the opposite side to the cloister, and this was probably its position at Bradenstoke.

THE BARN.

The priory barn still remains 400 ft. to the south-west of the south end of the western range and is placed with its centre line north-east and south-west (pl. xxxii). It dates from the middle of the fourteenth century and measures 104 ft. in length by 25 ft. in width. It is divided into nine bays, of which the middle one is wider than the rest to take a large porch 20 ft. by 13 ft. which projects from the north-west side.

The roof is of the same date as the walls and is made with heavy principals having collars at half height supported by arched braces. There are three



Fig. 1. Bradenstoke Priory. South-east side of barn



Fig. 2. Bradenstoke Priory. Barn from the north



Fig. 1. Kington Priory. South-west angle of cloister



Fig. 2. Kington Priory. West side of western range

purlins on each side all supported by arched wind-braces. The side walls are 15 ft. high and have bold buttresses behind each couple, but there are no buttresses at the angles, a logical design as there is no thrust from the end gables. There is a wide segmental doorway in the north-west wall in the south-west bay. In the south-east wall there are modern openings in the second bay from the east, in the middle bay and in the ninth bay. There are narrow square-headed loops in each remaining bay.

The porch has a wide segmental arched doorway of the full width of the porch with deep buttresses to take the abutment on each side. In the south-west wall is the usual small doorway of access to the barn after the big doors are bolted. At the north-east end are two buttresses, one in the middle of the gable seems to be original, but the other near the north-west angle is apparently an addition. There is also an added buttress on the south-east side in line with the north-east gable.

MONKTON FARLEY PRIORY

Like Bradenstoke, Monkton Farley is placed on high land just within the borders of Wiltshire, three and a half miles due east of Bath. There is an excellent water-supply from land springs, but there is no natural water-course for drainage.

Fifty years after the conquest the manor of Farley was in the hands of the great family of Bohun, but how they became possessed of it is not clear. Humphry, the son of the Humphry Bohun who accompanied the Conqueror, married Maud, the daughter of Edward of Salisbury and sister of Walter who founded Bradenstoke. This Humphry and his wife gave to the priory of Lewes land at Bishopstrow, called the Buries, and in the event of their founding a Cluniac house at Farley they would convey to the priory of Lewes the manor and tithes of that place on condition that the house of Lewes should supply a colony of monks for the priory of Farley who would enjoy the said endowments for their own use.¹ A small priory was erected, and the church at any rate was built in stone.

The original endowments were very considerably increased by Humphry Bohun, son of the founders, the Empress Maud, and one Ilbert de Chaz, a follower of the Bohuns. These endowments were confirmed to the monks by this third Humphry Bohun and by King Henry III in the eleventh year of his reign.² In consequence of this accession of wealth new buildings were erected, including a larger church.

¹ *Wilts. Arch. Mag.*, iv. 269.

² *Mon. Ang.* (London, 1849), v, 26 and 27.

In 1280 a dispute arose between the Bohuns and the prior of Lewes over the nomination of a new prior, which resulted in a lawsuit that ended in the usual medieval manner of settlement by compromise.¹

In 1298 the Crown seized two of the priory manors² which the prior farmed on behalf of the alien nunnery of Martigniac. But it ultimately gave back the manors, and seems in consequence to have claimed the status of hereditary founder.

During the fourteenth century considerable alterations were made to the church and a new presbytery was erected with new quire stalls.

In 1409 the priory and its estates were in the hands of Sir Walter Hungerford and Lord Stourton, doubtless on behalf of the Crown in consequence of forfeiture for not maintaining the full complement of brethren. Sir Walter Hungerford petitioned the Commons in that year

that whereas certain commissioners sent into Wiltshire had reported that he and Lord Stourton had suffered the priory of Farley to fall into dilapidation whilst it was in their care, he prays that the matter be tried by a jury of his peers.³

Whether the accusation was proved or not there certainly was great truth in it, for in April 1438 the tower of the church fell down.

On the third of February of the following year a release was granted for seven years

to John Brugge, the prior and the convent of the house of Farlegh of the yearly farm of 55 marks payable to the king for lands belonging to the alien nunnery of Mortigniake on condition that the amount be expended, under the survey of the bishop of Bath and the lord of Hungerford, in the repair of the convent church; which church and its tower fell down in April last crushing the quire and destroying their books, bells, and other ornaments. The petitioners shewed that they will never be able to repair their losses and resume divine service as it should be held without the king's generous help.⁴

The fall of the tower so damaged the presbytery and transepts that no attempt was made to re-edify them; but a new sanctuary was built on the site of the crossing and the quire was made in the nave.

At the end of the Lewes cartulary is a long deed in which Farley is described as of the foundation of King Edward III for thirteen monks to sing daily service for the king's welfare, and that they once incurred forfeiture for having maintained only ten brethren, instead of thirteen, for nine years.⁵

In 1535 the visitation of monasteries was begun with the idea of their

¹ *Mon. Ang.*, v, 27.

² *Ibid.* v, 28.

³ *Wilts. Arch. Mag.*, iv, 275.

⁴ *Rot. Pat.*, 17 Hen. VI, p. i, m. 20.

⁵ *Vide Wilts. Arch. Mag.*, iv, 275.

suppression, and in August of that year Farley was visited by Cromwell's creatures Layton and Legh. On the 7th of that month the former wrote to his master: 'Farley sell to Lewys the trewth is a vara stewys'; and a few days after he wrote: 'I sende yowe also Mare Magdalens girdell and that is wrappyde and coveride with white, sent also with gret reverence to women traveling, whiche girdell Matilda thempresse fownder of Ferley gave unto them as saith the holy father of Ferley.'¹

The act to suppress all monasteries of under £200 a year revenue was passed in the same year; but it did not come into operation immediately, as in many cases it was doubtful what houses came within the category. In order to ascertain this, commissioners were appointed for each county, and their report on Farley, dated 1st August 1536, is as follows:

- A. A hedde howse of Clunasents of Seint Benetts Rule (former valuation) £153 14s. 2½d. (present valuation) £195 2s. 8½d. with £18 4s. 6d. for the demaynes of the same.
- B. (Religious) six all being preests of honest conversacion, holley desyryng continuance in religion.
- C. (Servants) eighteen—viz. wayting servants five; officers of the household eight and hinds five.
- D. Church and mansion with outehouses in convenient state. The lead and bells viewed and estemed to be sold to £28 8s.
- E. (Goods) £89 18s. 7d. viz. juells and plate £30 3s. 3d.; ornaments £8 15s. 4d.; stuffe of household £10 13s.; stokkes and stores £39 7s.
- F. Owing by the house £245 2s. 7d. Owing to the house £51 10s.
- G. Great woods 100 acres and copis woods 66 acres; all to be solde estemed to £62 16s.²

The last prior Lewis Breknok had a pension of £24.³

Farley was granted on 6 June 1536 to Sir Edward Seymour, though not formally dissolved at the time. It was in 1550 exchanged with the see of Salisbury,⁴ under whom it was held by various owners.

In 1744—

Three Labourers being employed to level a very uneven Piece of Ground used for a Coney-Warren belonging to Webb Seymour, Esq. at Monkton-Farley, found the Pillar of a Church, and about four Foot under the Rubbish, discover'd a Chancel, of a very curious Roman Pavement in Chequer-Work, adorn'd with various Figures; the Bricks about four Inches square, and an Inch thick: This place consists of about 24 Foot each Way, its Situation being East and West. In the Front are four flat

¹ *Letters and Papers*, Hen. VIII, ix, 42 and 168.

² P. R. O. Chantry Certificates, 100. m. 2.

⁴ *Wilts. Arch. Mag.*, iv, 276 and 277.

³ P. R. O. Augmentation Book, 232, 21 f.

Stones, under which Persons are interr'd: The second stone from the Southward has a French Inscription on it and Prior Lawrence, who is represented in his Prior's Habit, in the Posture of Praying: He was buried A.D. 616 (*sic*). The substance of his Inscription is, He desires you to pray for his sins, etc. The other three Stones are without Inscriptions. In the North Angle of the Chancel is a Tomb, like a Seat, with the following Inscription on its Surface in Characters thus render'd.

(The inscription given is that on the monument of Ilbert de Chaz, which will be referred to later.)

It has also the same Inscription on the Side in Roman and Saxon Characters, after the present Way of Writing. About two Thirds of the Chancel, to the Eastward, is a Step ascending to the Altar, in which is a Sepulchre open'd, and the Skeleton of a stout Man, who was upwards of six Foot high. On the flat Stone of this Sepulchre is carved in Basso Relievo his Bust, and under that a Lyon, as an Hieroglyphical Emblem of his Character. This Person, by his near Interrment to the Altar, I suppose might be the Founder of this Abby or Monastery. To the South Side of the Altar is a Floor, about four Foot under the Rubbish of the same Pavement with the former, and about ten Foot square, but no Body interr'd there. On the North Side of the Altar, which I imagine was in the Church-yard, is another Sepulchre open'd, with the lower Part of a Skeleton, but the upper Part wanting. Farther to the Northward is a Yew-Tree, which is a plain Demonstration that this was a Church yard belonging to the Abby. To the West and Northward are several very large Stone Pillars with various Figures cut on them, which appear as fresh as if immediately hewn out of a Quarry. As to the Dimensions of this Church, 'tis impossible to give an exact Account how far it extended—For there were, about 20 years ago, to the Southward, at a considerable Distance, dug up three more Sepulchres, but without any Inscriptions upon them. Also an Heap of Bones, from which it is evident there was a Charnel-House belonging to this Church: 'Tis very probable, as the Rubbish is clear'd away, many more Curiosities will be discovered in the Body of the Church. The Labourers have found a Silver Cup, Spoon and Thimble.¹

Dr. William Evetts was at this time staying at Chippenham and he wrote to Dr. Ducarel, secretary of the Society of Antiquaries, of these discoveries and sent him some sketches of the various monuments,² but this communication does not seem to have been laid before the Society and his sketches are lost.

The late Canon Jackson records that

in 1841 during some further alterations of the ground by the late Mr. Wade Browne a large slab, once the covering of a stone coffin, was found. On it is the effigy of a cross-legged knight in chain armour, sculptured in low relief. On the shield, which lies not at his side but over the whole body occupying the full width of the stone, are the arms of Dunstanville (fretty on a canton a lion passant, surmounted by a label).³

¹ *Gentleman's Magazine*, xiv, 139.

² *Literary History of the Eighteenth Century* (J. G. Nichols), iii, 585.

³ *Wilts. Arch. Mag.*, iv, 283.

Further excavations were made on the site of the church by the late Sir Charles Hobhouse, and are briefly recorded by him with a plan in the *Wiltshire Archaeological Magazine* for 1882.¹ In 1911 Sir Charles caused further excavations to be made and the earlier discoveries were again exposed. These excavations were supervised by the writer, and though it was not possible to

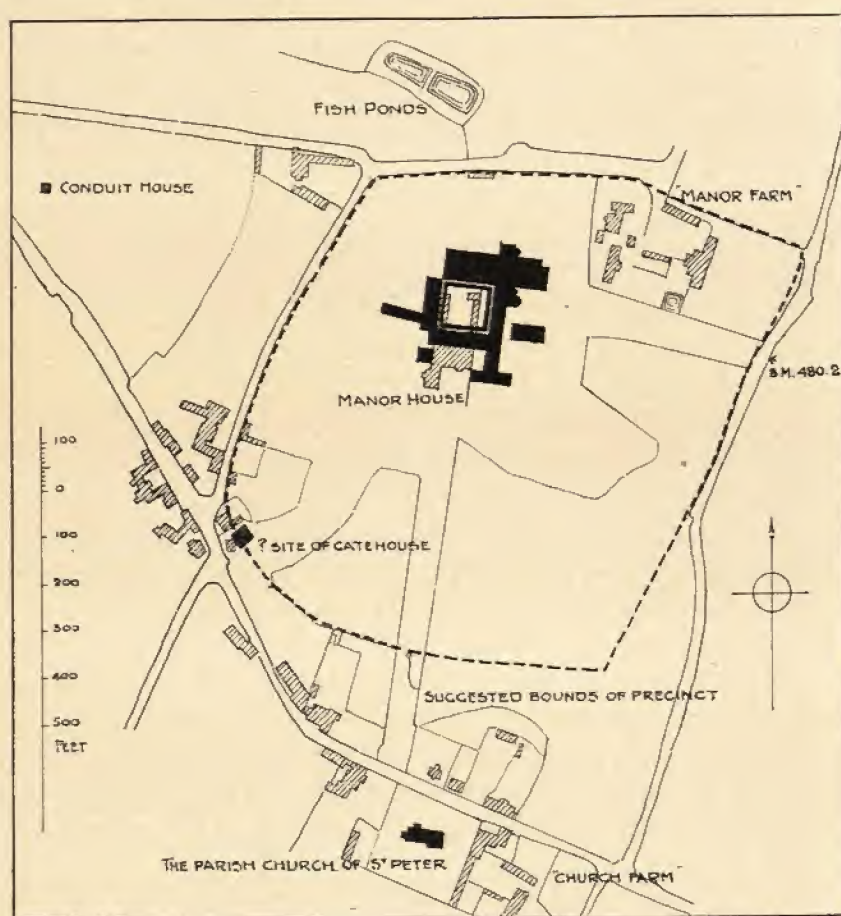


Fig. 3. Monkton Farley priory, plan of precinct.

continue them as far as might be wished, they have thrown considerable light on the plan and story of this church.

THE PRECINCT.

The bounds of the precinct are nowhere clearly defined, but the present roads on the north and west seem to indicate its extent on those sides, and there are indications of the other sides which give it an area of about 20 acres. The church and cloister were placed to the north-west of this area (fig. 3).

¹ *Wills. Arch. Mag.*, xx, 74.

The site is peculiar, the highest point being in the north-west angle and it falls rapidly to the south-east and again from the west end of the church to the north-east. The church was oriented slightly to the south of east, and at the present time the ground drops suddenly on its south side, but this is not an original feature as is shown by the only fragment of building that remains above ground. The reason of the present level is, that the makers of the house after the Suppression used up the claustral buildings and dropped the ground around the house to the level of the frater subvault. This dropping of the ground was continued at the building of the present house in 1762, and has apparently destroyed the foundations of the chief buildings south of the church.

The gatehouse was probably opposite the cross roads near where the present south lodge stands. The conduit for the water-supply is on the high ground 300 yards to the west of the church.

THE CHURCH.

The only part of the first church that has been found is the apse of the north transept chapel. The rest of the site of this church has been removed by the lowering of the ground already referred to.

This apse was 13 ft. wide by $9\frac{1}{2}$ ft. deep with an outer wall 3 ft. in thickness. The wall had a chamfered plinth externally and a pilaster buttress remained on the north-east side. The entrance from the transept was by an arch of two members of the full width of the apse. The inner member rested on a bold half-round column with moulded base that had toes at the angles.

The north-east angle of the transept itself remained and had pilaster buttresses on each face and its main walls were 4 ft. thick.

The church to which this fragment belonged was of course smaller than its successor and apparently consisted of a presbytery with eastern apse, transepts with apsidal chapels, and an aisleless nave.

As usual when the building of a new church was decided upon it was constructed alongside the original one on the side farthest from the cloister, in order that the existing structure might not be interfered with until the new building was ready for occupation.¹ The new church at Farley was erected clear of the old except for the apsidal chapel of the north transept, which was retained as the chapel of the southern transept of the new church.

Only the middle portion of the later church has been excavated, so that the

¹ Cf. Waverley (*Surrey Archaeological Collections*, 1905), Haughmond (*Archaeological Journal*, lxvi, 281), and Tintern (*Official Guide*).

complete plan cannot be definitely described though the parts uncovered reveal a very interesting story.

The second church when first built consisted of a short presbytery with eastern apse and ambulatory aisle, transepts with eastern chapels, and a nave with aisles. There was a tower over the crossing. Of this church the western piers of the crossing, the junction of the transepts and aisles, and the south side of the presbytery remained from 12 in. to 3 ft. above the floor. The floor area was covered with pattern tiles divided by stone bands.

The presbytery was $25\frac{1}{4}$ ft. wide and the south aisle was $9\frac{1}{2}$ ft. wide with an outer wall 4 ft. in thickness. At 14 ft. from the transept was a pilaster buttress 3 ft. wide. The paving of the aisle remained complete and had at 17 ft. from the transept a cross band of stone of which the west side was square with the aisle, but the east side tapered from $8\frac{1}{2}$ in. at the north end to 13 in. at the south. This tapering band indicated that the pavement to the east radiated from a centre, and the only reason for it doing so was the existence of an apse with an ambulatory aisle. If the tapering sides of the band are continued to the middle of the presbytery it gives the centre from which the apse was struck.

The crossing was approximately 25 ft. square and the western piers remained complete. These show that the north and south arches were of two members of which the inner was carried by a pair of half-round columns. There were no responds for the western arch, which was doubtless carried on corbels as at Malmesbury.

The south transept was apparently 35 ft. long by 25 ft. wide, but no remains of the south wall were found. The west wall had, next the crossing, an arch into the nave aisle of three members carried on responds having triple moulded columns on square bases of the same plan as the main piers at Wells Cathedral. In the angle formed by the transept and south aisle was a vice, $6\frac{1}{2}$ ft. in diameter, which opened from the transept by a doorway of a single square member. The apse of the original north transept was retained as the eastern chapel of this transept, which is shown by the paving of the thirteenth century being found within it. There were two steps across the original arch from the transept, which had tiles on the risers as well as on the treads. In front of the chapel were two grave slabs ornamented with foliated crosses. The tile paving of the rest of the transept was almost complete and had stone bands 5 ft. apart in line with the nave aisle and others the same distance apart in the opposite direction down the middle of the transept.

The north transept was doubtless similar to the south but was not exposed, except the arch into the nave aisle, which was precisely like its companion on the south and had similar bands in the tile flooring to the east of it.

The main span of the nave was the same as that of the presbytery, but the aisles were 11 ft. 8 in. in width. The responds of both arcades remained next the crossing and were each of three members like the arches into the transepts.

In the fourteenth century the presbytery was lengthened eastward with a square east end, and the old apse and ambulatory were removed. The eastern end of this building was that uncovered in 1744 and the remains then found appear to have been grubbed up, which is particularly unfortunate as the exact position of them with respect to the rest of the building cannot be determined. The monument of Ilbert de Chaz, which had been removed from the earlier church, was placed on the north side of the altar apparently in a recess, as is indicated by it having the first part of the later inscription cut on a detached stone which was evidently placed at the head of the monument to fit an opening. The stone of the 'stout man' was in front of the altar and the four other slabs were in a row on the step below. The floor described as about 10 ft. square to the south of the altar must have belonged to a chapel added at the east end of the south aisle. Dr. Evetts describes this more fully as 'another place lower in the ground than the former which seems to me to have been a private chapel for confession and in the wall is a place for holy water. The pavement the same as the other. The walls are perfect above a yard high almost quite round it up to the bottom of a window in one part.'

Of the altered presbytery the 1911 excavations revealed a considerable piece of the south wall next the crossing, in which at 17 ft. from the transept was an opening 4 ft. wide with chamfered angles but no door. A portion of the north wall remained, but there was no corresponding opening to that on the south. Eastward of the opening in the south wall was a step across the presbytery. There was another step 9 ft. to the west of this and the platform between was paved with tiles. It had at the north end a grave slab bearing an incised cross.

Below the western step was the monks' quire belonging to the new presbytery. On either side, 14 ft. apart, was a stone base-course having a row of little projecting buttresses to take the wooden fronts of the stalls. At 8 ft. on either side below the step was a half-round step which led to a gangway between the fronts of the stalls. The stalls were probably continued down to the west side of the crossing, where they were returned against the pulpitum which divided the quire from the nave.

The fall of the tower in 1438 was due to the failure of one or both of the eastern piers of the crossing, and its collapse caused so much damage to the

¹ *Literary History of the Eighteenth Century*, iii, 585.

presbytery and transepts that no attempt was made to reinstate the ruin. A new sanctuary was built on the site of the crossing and a new quire was made in the uninjured nave. The new work had walls only 3 ft. in thickness and had double buttresses at the angles. The north wall was found with a plain chamfered plinth and the rest of the work had been destroyed to the foundations. In the first arch of the nave on the south side a recess was added at this time perhaps for sedilia. The eastern jamb remains, and this has a wide panelled chamfer with beaded angles and moulded bases.

The nave has not yet been excavated, so it is not possible to speak definitely of the arrangements which must have been added after the fall of the tower. The first bay was probably left clear and the new quire erected in the second and third bays with a pulpitum at the third pair of pillars. Owing to the destruction of the eastern chapels the nave aisles were probably parted off to form chapels to take their place.

THE WESTERN RANGE.

The only building of which any remains exist is a late twelfth-century hall on the west side of the western range placed east and west and slightly out of square with the range. The fragment is only 20 ft. long but stands to a considerable height; it retains the north-west angle of the building, which had a pilaster buttress, and two lancet windows of its north side. These have moulded jambs and arches, and rest on a bold string-course externally; internally they have deep splays and the sills have notches to receive the wooden frames of the glass.

Near this fragment is a shed containing a number of architectural fragments and floor tiles. With them are the remains of the tombs which had been discovered on the site:

(1) The monument of Ilbert de Chaz, which is a grave slab 5 ft. 10 in. in length by 2 ft. wide at the head and 18 in. at the foot. Down the middle is an inscription formed of large letters containing smaller ones which reads:

Hic jacet Ilbert de Chaz bonitate referē qī c Brotona dedit hic pplurima dona.¹

When the monument was refixed in the new fourteenth-century presbytery a new expanded inscription of the same reading was cut on the edge, and this began on a stone which had been added at the head to make out the original slab to the full length of the recess it occupied.

¹ This is illustrated in Canon Jackson's paper already referred to (*Wilts. Arch. Mag.*, iv, 283), and Bowles and Nichols, *Lacock Abbey* (Lond. 1835), 352.

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(2) The Dunstanville slab as already described by the late Canon Jackson. The label has five points.

(3) The trunk and head of an effigy in chain mail from an altar-tomb, but the shield has gone so that it cannot be identified.

Unfortunately there is no record where these last two objects were found.

THE CONDUIT HOUSE.

The conduit house is a stone building 9 ft. square externally and has a deep splayed plinth. It is entered by a segmental-headed doorway, and has over the doorway and in the opposite wall a square-headed loop. It is covered by a steep roof made of stone slabs with rebated edges to keep out the weather. On the east face of the top quoin of the north-east angle is cut SQ' x TURNER 1784, and on the top stone of the south jamb of the doorway E BATCHELOR 1784.

The conduit is apparently of fourteenth-century date, but the upper part and the roof were rebuilt in 1784.

There is a similar conduit of fourteenth-century character though actually built 1540-53 on the top of Bowden hill, some nine miles away, in connexion with Lacock Abbey.

KINGTON PRIORY

The remains of this little priory of Benedictine nuns are in a secluded depression three miles north-west of Chippenham. The actual founder is not known with certainty and in Aubrey's time the Empress Maud was credited with the good deed. Among the charters printed in the *Monasticon* are three which throw some light on the matter.

(1) Robert of Brinton and Eva his wife, during the episcopate of Jocelyn of Sarum (1142-84), gave the church of Iwerna (Ewerne Stapleton in Dorset) to the nuns of Kington.¹

(2) About the same time A(dam) of Brinton gave 'to God and our Lady and the nuns of Kyngton all the land in that place which the said nuns hold of me'.²

(3) Also about the same date Hugh de Mortimer confirms the last gift as follows:

know that I have granted to God, our Lady and the nuns of Kington serving God there . . . all the land which A(dam) of Brinton holds of my fee in the same

¹ *Mon. Ang.*, iv, 400, no. x.

² *Ibid.* iv, 398, no. ii.

vill . . . which R. the son of Weyfer of Brinton gave to them when he founded the place.¹

One of the witnesses is R. de Brinton and is presumably the same as Robert of the first deed. In the book of obits drawn out anew in 1493 there is no mention of Robert, but 'Adam sonne of Waifere of Kynton, Roger Mortimer and Sir Hugh Mortimer that gave us all our lands in Kyngton' are to be prayed for on 7th January.²

The priory was built in stone probably by the founder and was never a large house.

In 1221 there existed a corrody under the patronage of the crown for two poor girls.³

The church was apparently reconstructed early in the fifteenth century, for on the 15th March 1435 'the altar of the church of Kynton was dedicated in honour of the Holy Mother of our Saviour by Ralph, bishop of Sarum'.⁴ Considerable other works were done including the rebuilding of the whole of the western range with the prioress's lodging.

In 1493 the obituary was 'drawn out anew by K. Moleyns, prioress, during Lent', and at the foot of the page of March obits is the following interesting entry:

In the days of Dame Kateryne Moleyns Prioress here, John Baker gave to this House at Minchyn Kyngton,

A Bone of St. Christopher closed in cloth of gold, a noble Relyke.

Thys boke, for to be their Mortiloge.

A boke of Seynts Lyves yn Englishe.

A Spruse table and a Cubbord that be in their parlor.

The mendyng and renewyng of an old Mas Boke of theirs.

A Fetherbed, a bolster, a Pylow and 2 fair Coverlettes.

The half of the money that was paid for the Ymage of Seynt Savyor standing upon the Auter for their quire. And for the Ymages of St. Mighel and St. Kateryne in St. James's Chapell.

Also the Aulter Cloth of the Salutacyon of oure Lady, being in St. James's Chapell and 3 yards of Canvass annexed thereto to lye upon the Auter.

A Tester and a Seller that hangeth over my Lady's Bed. A Grail. A fair Matyns Boke, with Dirige and many good Prayers. A dozen of round pewter dishes with heires.⁵

This entry is most valuable in being the only evidence of St. James's chapel,

¹ *Mon. Ang.*, iv, 399, no. iii.

² *Wilts. Arch. Mag.*, iv, 61.

³ *Rot. Claus.*, 1221 et seq.

⁴ Book of Obits printed by Canon Jackson, *Wilts. Arch. Mag.*, iv, 60-7.

⁵ *Wilts. Arch. Mag.*, iv, 62, foot-note.

which would seem to have been something more than one of the altars in the church. If the three yards of canvas can be taken as the length of the altar it must have belonged to a chapel of considerable size.

In the days of this prioress there were nine nuns in the house, which decreased to three at the Suppression.

In 1535 the emissaries of Cromwell made themselves particularly offensive on the occasion of their visit to Kington. John ap Rice wrote to Cromwell—

At Keynton where there is but thre ladies in the house we have founde ij convict of incontinencie. Thone whereof bicause she was under age of xxiiij and not very desirous to continue in religion, Mr. Doctor hath discharged. And one Dame Marie Denys, a faire yong woman of Laycok is chosen Prioress at Kyngton aforesaid.¹

The commissioners of the county in the following year reported of this priory:

Priory of Kyngton.

- A. A hedde house of Minchins of Seint Benedicts rule. (former valuation) £25 9s. 1½d.; (present valuation) £35 15s. with 100s. for the demaynes of the same.
- B. (Religious) four, by reporte of honest conversacion, all desyring continuance in religion.
- C. (Servants) eleven—viz. chapleyn one; clerk one; women servants four; wayting servants one; hinds four.
- D. Church and mansion in good state. The oute houses in summe ruyne for lacke of coveringe. The lead and bells there esteemed to be solde to 105s.
- E. (Goods) £17 1s.—viz. ornaments 8s. 6d.; stuffe 2s. 10d.; and stoores of corne and cattall £12 19s. 8d.
- F. Owyng by the house £50 and owyng to the house nil.
- G. Great woods none, copyswoods 36 acres: esteemed to be solde £24.²

The prioress Mary Dennys, the 'faire yong woman of Laycok', had a pension of 100s. 'She dyed in Bristowe 1593, a good old maide, verie vertuose and godlye and is buried in the church of the Gauntes on the Grene.'³

At the Suppression the site was granted to Sir Richard Long of Wraxall and Draycot⁴ and has since passed through many hands.

John Aubrey lived within a mile of the priory and has left a number of notes upon it in his collections from which the following may be taken as referring to the buildings.

¹ *Letters and Papers, For. and Dom., Hen. VIII, ix, 160.*

² P. R. O. Chantry Certificate, 100, m. 2.

³ Lib. Corp. Christi Coll. Oxon., no. ccxx, f. 36, b; *vide Wilts. Arch. Mag.*, iv, 55.

⁴ *Wilts. Arch. Mag.*, iv, 71.

This is a very pleasant seate and was a fine Nunnery . . .

On the east side of the howse is a ground . . . called the Nymph-hay. Here old Jaques, who lived on the other side, would say, he hath seen 40 or 50 sisters, nunnes, in a morning spinning with their rocks, and wheelles, and bobbins . . .

Their last Priest was parson Whaddon whose chamber is that on the right hand of the porch with the old fashion chimney.

The Lady Cicelie Bodenham was lady Prioress here. In the parlour windowe was, and in the Buttery yet, the coat of Bodenham with a mitre to which were two chains, or. Also the coat of Bodenham . . . quartering G three bars checky A and S. Also in the parlour window this coat, G two bars nebule O. above the coat a mitre . . . In divers panelis of glass about the howse are the letters B.D.

In the Chapell, which was very fayre, is neither glasse, chancell nor monument remayning. Formerly and lately in the garden where chancell and consecrated ground was, have been digged up severall coffins of freestone and one stone was found of about two foote diameter . . . having in the centre on one side a heart held between two hands: it was found at the foote of a grave in which there was found a Chalice.

The windowes of the Chapel of Priory St. Maries like those in the Tower of Merton Coll. Oxon.¹

The house was considerably altered shortly after Aubrey's time by the insertion of larger windows and a large gable added on the west side. All that now remains above ground is the western range, and the frater on the south side of the cloister.

Small nunneries existed all over the country, but only a very few have been traced by excavation. These houses were mostly very poor, and the buildings, though arranged on a systematic plan around the cloister, were a great contrast to those of their rich neighbours. In many cases the buildings were of wood, and the roofs sometimes had no more permanent covering than thatch.

Some years ago our Fellow Mr. William Brown published a valuable paper upon some Suppression documents containing detailed descriptions of eleven small nunneries in Yorkshire, of which five were Benedictine houses, and a few words upon these houses may throw some light upon the remains at Kington.²

The churches in all cases were parallelograms varying from 80 ft. by 20 ft. to 50 ft. by 18 ft.; there was a high altar and two other altars in the quire. The quire stalls were of wood and in one case there were '22 fayre stalles carved and boarded with waynscott'. The portion of the church below the quire was merely an antechapel containing one altar. In each case the roof was covered with lead. The cloisters were all 60 ft. square save one which was 48 ft., and the alleys varied from 5 ft. to 10 ft. in width. In three cases the buildings on the first

¹ *Wilts. Collections*, 143, 144, and 145.

² *Yorkshire Arch. Journ.*, ix, 197-215, and 321-33.

floor covered the alleys. The chapter-houses were very small, one being only 12 ft. by 8 ft., but they were always next the church on the east side of the cloister. The dormer always occupied the whole of the east side of the cloister on the first floor. The frater was in its usual position on the side of the cloister opposite to the church, but it only remained, and that in a contracted form, in three cases and in the other two it had been converted into a garner. The west side of the cloister was in all cases occupied by the prioress's lodging, the guest-hall, and a parlour. The kitchen was of various sizes placed at the lower end of the hall, and in one case there were two kitchens, but the second was only 8 ft. square.

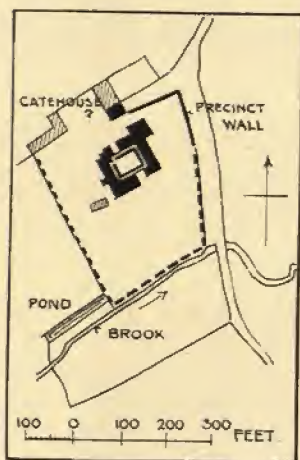


Fig. 4. Kington priory, plan of precinct.

The warming-house is nowhere mentioned, but it seems to have been supplanted by a parlour with a fireplace, and this is generally in the western range. The infirmary is also omitted as the legitimate use of the place had apparently died out, and one of the various chambers was doubtless used in cases of sickness.

The priest's room occurs in two cases, in one it follows the list of farm buildings and in the other it was actually without the gates. A corrody occurs in one instance, and the chamber allotted to the recipient was over the kitchen.

Besides the buildings round the cloister there were generally a brew-house with a bulting-house, and a bakehouse near the kitchen, though in one case the former were beneath the frater. There was also an outer court entered by the gatehouse and surrounded by stables, cow or ox houses, hay and corn barns, and other outhouses. There was generally a dovecot.

THE PRECINCT.

The precinct at Kington seems to have contained only some three acres, and part of the enclosing wall remains with its stone coping on the east and north. The site of the gatehouse is not clear. On the south side is a large brook, and outside the west side of the precinct is a fish-pond (fig. 4).

The farm buildings seem to have been where they are now on the north side of the precinct outside the wall.

THE CHURCH.

The church was on the north side of the cloister, but nothing is standing and its foundations have not yet been traced. The western part stood until about the middle of the eighteenth century, but the eastern parts with St. James's

chapel had gone in Aubrey's time. Writing in the *Gentleman's Magazine* in 1803, John Britton says that 'a very large circular arch that belonged to the chapel yet remains; but the site of this sacred building is now occupied by pig-sties'.¹ A capital of mid-twelfth century date belonging to a doorway was dug up some years ago and probably belonged to the church.

The chapel of St. James was doubtless a side chapel on the north side of the presbytery similar to the Lady chapel at Lacock.

THE CLOISTER.

The cloister was $57\frac{1}{2}$ ft. from east to west by $54\frac{1}{2}$ ft. from north to south, but nothing of the alleys remains, except a short length of the weathering over the lean-to roof at the north-west angle. None of the surrounding buildings oversets the alleys like the majority of the Yorkshire examples.

THE EASTERN RANGE.

The east side of the cloister was occupied by a range of building $14\frac{1}{2}$ ft. wide of which the foundations have been traced.

The lower storey was divided by a cross wall 2 ft. thick at $22\frac{1}{2}$ ft. from the north end. In the west wall next the church was an opening apparently for the stairs to the upper floor, and there was a second opening south of the cross wall. The northern division from its position must have been the chapter-house, the size of which, 19 ft. by $14\frac{1}{2}$ ft., compares very favourably with the Yorkshire examples. The southern division was 30 ft. long, and the northern end was probably parted off to form a passage through the range to the cemetery on the east. The south end of the range stands to a considerable height and retains its original quoins at the south-east angle. The eastern half of the south wall is occupied by a large fireplace with a wooden head which indicates that this chamber was the warming-house. As already shown, the warming-house seems in nunneries to have become before the Suppression a regular parlour where the inmates might sit and work in bad weather.

The upper floor of the range was the dormer of the nuns in connexion with which must have been a rere-dormer, but no remains of this have been found up to the present.

THE FRATER.

The south side of the cloister does not seem to have been occupied by a continuous range of building in the usual manner. A building apparently occupied the eastern end for about 14 ft., but the site is covered by pigsties and

¹ *Gentleman's Mag.*, lxxij, 717.

cannot be excavated. From the western end of this building for some 10 ft. the cloister wall retains its original stone coping. The western part of the south side of the cloister is occupied by a two-storied building 25 ft. from east to west by $17\frac{1}{2}$ ft. wide, which appears to date from the thirteenth century. Towards the eastern end of this building are the remains of a segmental-headed doorway leading from the cloister to the upper floor (pl. xxxiii, fig. 1).

This upper floor was the frater of the convent. It had a square-headed window to the west of the entrance over the cloister roof, now blocked, and a square-headed loop in the east wall. The south wall, for two-thirds its length, is thickened out to $5\frac{1}{2}$ ft. and seems to have contained the pulpit. A roughly constructed roof of fifteenth-century date with cambered and chamfered tie-beams remains above the building. There must have been a serving-hatch or doorway in the west wall from the kitchen.

The room below retains the jambs of an original doorway at the west end and a small square-headed loop in the east wall. In the block under the pulpit a large fireplace has been inserted, the jambs and head of which have since been removed. The original use of the room was doubtless a cellar in connexion with the kitchen, but if the fireplace was monastic its use must have been changed.

THE KITCHEN.

The kitchen was to the west of the frater so as to be convenient for that place and the guest-hall; but nothing of it remains but a small square window in a piece of the south wall next the frater and a four-centred moulded doorway in the north wall. The site is covered by a two-storied building of the eighteenth century.

THE WESTERN RANGE.

The whole of the west side of the cloister was covered by a range of building which continued northward in front of the west end of the church and measures 60 ft. in length by $17\frac{1}{2}$ ft. in width. The main walls and the roof stand almost as the nuns left them and form an interesting group of buildings (pl. xxxiii, fig. 2).

At the south end of the range is a chamber $12\frac{1}{2}$ ft. from north to south with a two-light cusped window in the west wall where in Aubrey's time were the arms of Bodenham. It was doubtless the buttery, and had originally, as now, a passage cut off its east end to communicate from the kitchen to the guest-hall.

Over the buttery and passage is a room with a fireplace in the south wall

and the remains of a similar window to that below in the west wall. This room is apparently that which Aubrey says was the priest's room, and it must have been gained by a flight of steps next the passage.

Northward of the buttery the range was occupied by the guest-hall 31 ft. in length. This was open to the roof, which had tie-beam principals like the frater and curved wind-braces under the purlins. The south end is occupied by a passage 6 ft. wide which in a normal arrangement was placed behind the screens at the lower end of the hall; but recently a wide fireplace with chamfered jambs has been found backing upon the western half of the passage. This is probably an original arrangement and is an exact counterpart of the fourteenth-century guest-hall at Birkenhead Priory. The hall is now lighted by two seventeenth-century windows and divided by a floor into two stories, but in Aubrey's time it retained a pair of original two-light pointed windows. The passage is entered from the west by a four-centred moulded doorway and seems to have had a small doorway opposite into the cloister.

The entrance is protected by a low porch having an open archway with a modern head, and it retains its original roof of arched rafters. Built into the gable over the archway is a twelfth-century beast's head exactly similar to the label terminals of the main arcades at Malmesbury.

At the north end of the hall is a room 12 ft. from north to south in which there was a fireplace in the south wall; but the original window in the west wall has been destroyed. In this window were the arms of Bodenham with a mitre crest and Bodenham quartering gules three bars chequy argent and sable, as noticed by Aubrey. The room was probably connected with the hall by a small doorway and was used as a guest-chamber or parlour. Opposite the entrance from the hall was another doorway into a room to the north.

This room is beyond the line of the range and measures 10 ft. from north to south by $8\frac{3}{4}$ ft. wide. In the west wall is a four-centred doorway from without; but the other original arrangements have been destroyed. Along the north wall must have been a garderobe pit, and there was doubtless a garderobe in the room itself. Outside the hall and parlour are three buttresses each of two sets-off.

Eastward of the garderobe is a chamber, $13\frac{3}{4}$ ft. from east to west by 10 ft. wide, placed along the north side of the cloister. This room has in the east wall a pointed doorway from without and a three-light Tudor window in the north wall. On the south side is a slight projection in which is a tall four-centred doorway with a rebate for a door opening inwards. The room formed the entrance to the prioress's lodging and was from its position used as an outer parlour for interviewing visitors.

The doorway in the south wall entered a large vice $7\frac{1}{2}$ ft. in diameter, that

is contained in a square turret occupying the north-west angle of the cloister, and leads to the upper floor.

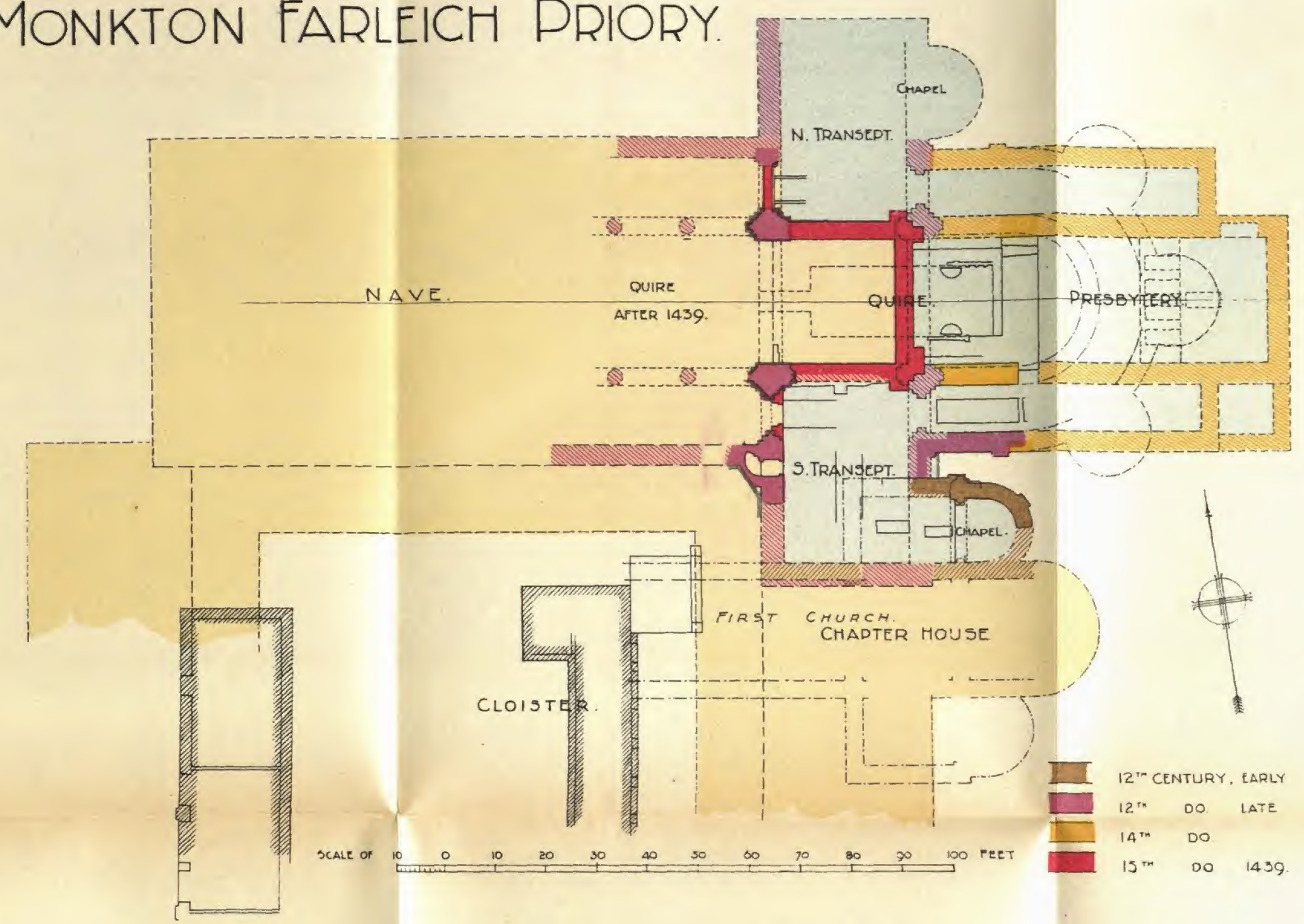
The upper floor, over the guest-chamber, garderobe, and outer parlour was the prioress's lodging. The room over the guest-chamber has an original fireplace in the south wall, a two-light cusped window in the west wall, and a four-centred arched doorway at the east end of the north wall. The entrance from the vice was in the middle of the east wall, but the original doorway has been destroyed. The roof is of the same character as that over the hall. The little doorway in the north wall was the entrance to the garderobe, which has an original cusped loop in the west wall; but its other arrangements have been removed.

The room over the outer parlour was apparently entered from the top of the vice and was the prioress's bed-chamber. It has a two-light Tudor window in the north wall, and a small square window with moulded jambs and head in the east wall which has stone window seats.

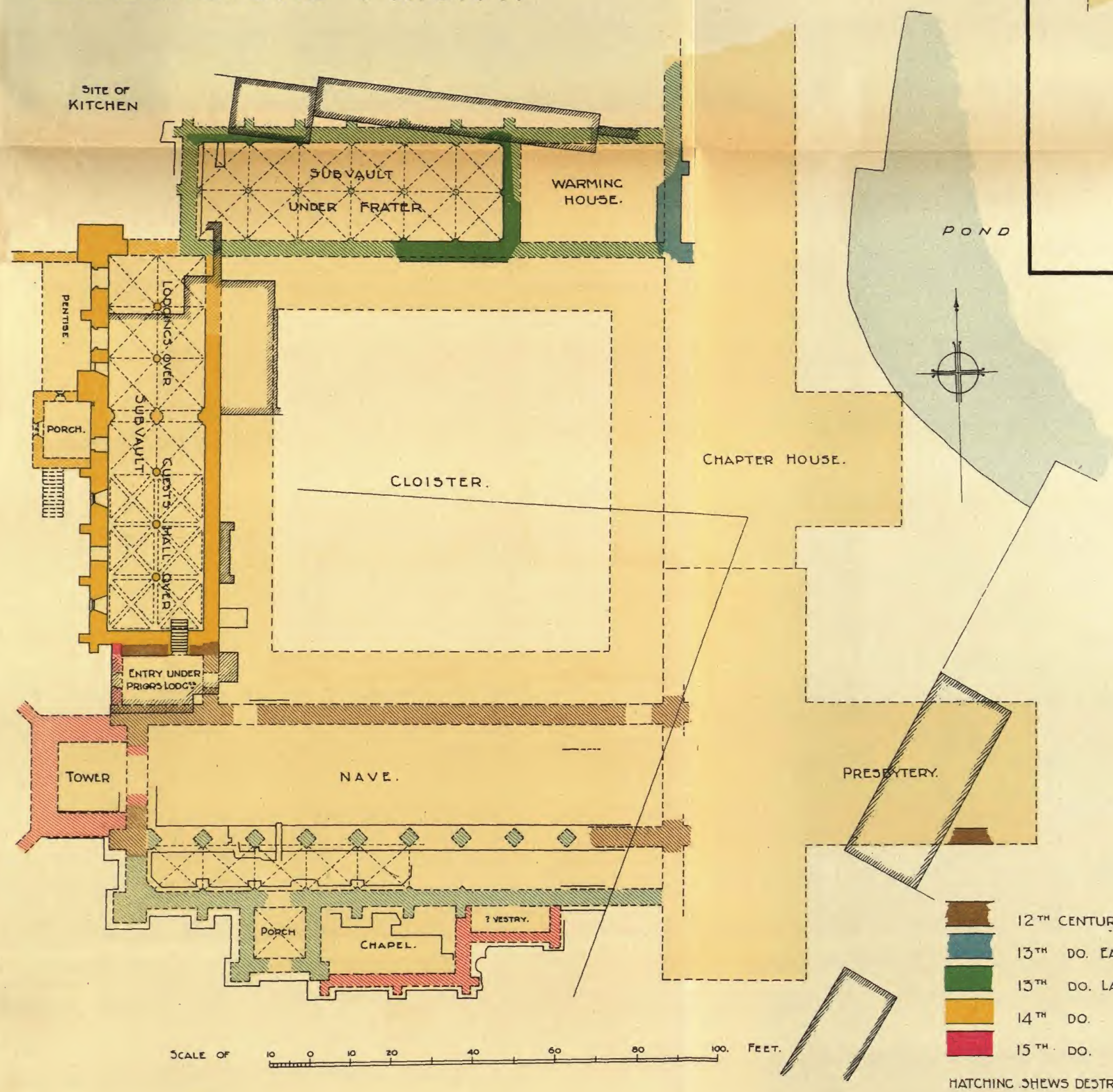
Between the outer parlour and the west end of the church was an entrance to the cloister of which the western jamb remains.

The royal corrody house within the priory of Kington seems to have been of early foundation, though its origin is unknown. The house was being rebuilt in 1221 at the charge of the king, and the Close Rolls contain a number of orders for the supply of timber and money for this purpose. The corrody was for two eleemosynary girls to reside therein at the king's pleasure, and there are grants of money to the prioress for their maintenance during 1221 and the two following years. No sign of this house remains, and the corrody seems to have lapsed long before the suppression.

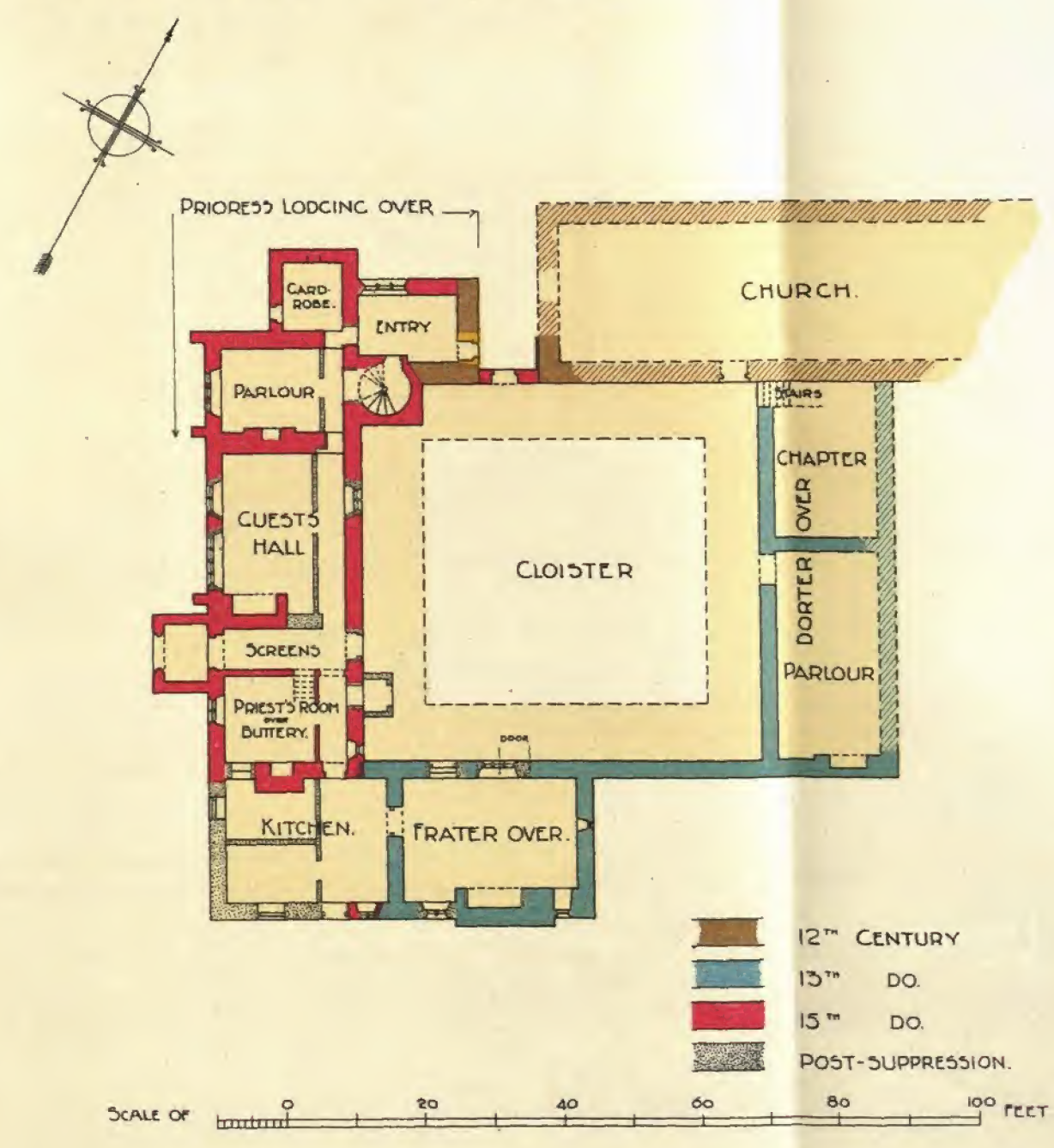
MONKTON FARLEICH PRIORY.



BRADENSTOKE PRIORY.



KINGTON PRIORY.



Harold Brakspear, F.S.A.
mens. et del.



NOTION



NOTION

NOTION



X.—*The Bronze Sword in Great Britain.* By W. PARKER BREWIS, Esq., F.S.A.

Read 15th February 1923.

It may be premised that no stone or wooden weapon can rightly rank as a sword, for such can at best be but a flattened club, and not until the advent of metal could such a weapon as the sword be made. Moreover, in early days metal was too scarce and the workers were insufficiently skilled to make so large a casting. It has been assumed that because arms took a higher rank than tools or domestic implements, therefore the first use to which metal was put was the manufacture of arms,¹ but such a deduction is erroneous, at least as far as Great Britain is concerned.

With the probable exception of gold ornaments, there can be but little doubt that the axe, the awl, and the knife blade, three domestic implements, were our first metal products, for they pass by an easy transition from stone to metallic forms. Our first metallic axe is but a change in material, and retains the form of the stone axe—the same is true of the first metallic knife, and the method of mounting it.

Fig. 1 is an example of one of these primitive knife blades, now in the Museum at Devizes. It was found associated with a beaker in a barrow on Mere Down, Wilts., and has frequently been described as of bronze—however, on analysis it was found to be of copper with no admixture of tin. It consists of a plain blade 5 in. long, only 1.5 mm. in maximum thickness, and flat on both sides. It was cast by the early method in an open mould, and subsequently received a slight bevel at the edge to make it sharp. The narrow end can scarcely be called a point, and the broad end is furnished with a tang for mounting by the simple Stone Age method—viz. letting the base of the blade into the hilt and binding it in. From this slender domestic beginning was evolved our first sword.

The late Sir John Evans in his *Ancient Bronze Implements*, p. 222, followed

¹ Evans, *Ancient Bronze Implements*, p. 222; Rice Holmes, *Ancient Britain*, p. 140.

Dr. Thurnam in regarding rivets as earlier than the tang, but the primitive metal blade could not be mounted by means of rivets.¹ These were unknown until man had some experience of malleable metal, yet so soon as he acquired sufficient experience and skill, rivets were added to consolidate the mounting. Fig. 2, now also in Devizes Museum, was found in a barrow at Normanton Bush, Wilts. Here the tang is supplemented by rivets on either side. These rivets proved a more satisfactory method of attaching the blade to the hilt, so the tang was for a time dispensed with, the entire width of the base of the blade being inserted a short distance into the hilt and secured by two or more rivets. The so-called knife-dagger (fig. 3) from Butterwick, Yorkshire (British Museum), is in reality a purely domestic knife.

Such an implement, in constant use for cutting, required continual whetting to keep it sharp and efficient. This resulted in a change in the form of the blade. An example in the British Museum from Helperthorpe, Yorkshire (fig. 4), is one of the well-worn knives found in a British barrow; its original form resembled that from Butterwick. First the wear began near the hilt, causing an inward curve of the edge; secondly, it made the blade narrower and the point more acute; thirdly, it left the centre as thick as before and therefore much stouter in proportion to the now narrowed blade. Craftsmen would not be slow to see that an enlargement of this worn form of the knife was superior to its primitive form as a model on which to base the dagger. The comparatively wide spread at the base of the blade gave lateral stability, whilst the thickened centre gave stiffness and was no disadvantage in a purely thrusting weapon such as the dagger.

With increased command of metal, double moulds were used; the knife was enlarged, strengthened in its fabric, and given a mid-rib and point, being thus converted from a cutting knife into a thrusting weapon, the dagger (fig. 5) usually having the outline of a well-worn knife.

The early knife blades had a varying number of rivets—one to six or more, whereas later dagger blades usually had a standard of two rivets just included in a spade-shaped butt. Indeed the rivets are so near the fringe of the butt that they are often torn out (figs. 5 and 6).

The dagger is found of very varying sizes. When still greater experience and skill had been acquired in the working of bronze, daggers were made of such length as to be given the name of rapier (fig. 6). No hard and fast line

¹ Unless, indeed, we agree with those who insist that the knowledge of metal was introduced into these islands by a people bringing with them metal implements of an advanced stage of development. On the other hand, a race whose knowledge of metallurgy had advanced so far would not have reverted to more primitive forms—for instance, if they had arrived with flanged axes, they would not have reverted to the earlier flat forms.

can be drawn between the dagger and the rapier, for the rapier is but an elongated dagger. One (fig. 7) in Brentford Museum is $27\frac{1}{4}$ in. long.

So much in brief for the birth of our first sword, the rapier, a purely thrusting weapon evolved by lengthening the dagger little by little, keeping step with the ever-growing command of metal, and ability to make larger castings.

Although this type of rapier is not confined to Great Britain and Ireland, yet these islands are its home. No other country of western Europe has produced a rapier comparable to the well-known Irish example (fig. 8). It is second only to those of the Minoan culture. Its weakness is the method of mounting, for again one of the rivets has been torn away.¹ It is over 30 in. long and only $\frac{5}{8}$ in. broad across the centre of the blade, where its section (fig. 9) is lozenge shaped, a form useless for cutting but excellent for thrusting.

The thrust is quicker in time and more deadly than the cut—yet the cut had to come, for thrusting is an acquired art. A man learns with difficulty to strike out straight from the shoulder, for his natural blow sweeps in a segment of a circle centred in his shoulder, and in the heat of a fight he instinctively slashes at his enemy.

The demand for a slashing weapon did not at first result in the cutting sword.² It was met long before metallurgists were sufficiently skilled to fashion so large a casting. The dagger led a threefold life. The development in the direct line to the rapier has been indicated, and at an early period the dagger blade was also mounted on the end of a long shaft, forming a spear-head (fig. 10).³ But long before that event occurred, it had been mounted transversely on a short shaft, forming the axe-dagger, or so-called halberd (fig. 11). The true halberd is a 6 ft. pole-weapon, whereas this is merely a dagger-like blade hafted in the manner of an axe. At first, no doubt, the blade was not differently fashioned from the dagger, but subsequently it was specially made heavier, often with a slight curve and larger rivets.

Because these axe-dagger blades are made of copper it has been assumed

¹ Wilde's *Catalogue of the R. I. A.*, fig. 314, represents this blade as complete; in consequence this error has been perpetuated, but the late George Coffey stated that it was defective when found.

² Many writers have contended that our bronze leaf-shaped swords were intended for thrusting rather than cutting (Rice Holmes, *Ancient Britain*, p. 147; Lord Avebury, *Prehistoric Times*, 6th ed., 1912, p. 30). Had this been so, the rapier would not have yielded place to a form less suited for thrusting, for the method of using the sword governs the form of the weapon. For thrusting it is desirable to have extreme mobility, and a centre of gravity near the hilt, whilst for cutting the weight should be well up the blade, behind the centre of percussion. The centre of gravity must not be confused with the centre of percussion: the latter is that part of the blade that should come in contact with the object struck.

³ See *Archaeologia*, vol. lxi, pp. 439-72.

that they are all early, of the Copper Age, before bronze was known. Of this there is no evidence. On the contrary, axe-dagger blades of Great Britain and Ireland are usually more massive than continental specimens, being sufficiently stout to withstand concussion. It was not because tin was unknown, but because copper was found better for the purpose than the more brittle bronze. Tin was thus saved and the weapon rendered none the less efficient. In the National Museum of Antiquities, Edinburgh, is a hoard (fig. 12) from the island of Islay. It contains two socketed axes, one flanged adze and a spear-head with loops at the base of the wings, associated with an axe-dagger blade 10 in. long. Again at Stoke Ferry, Norfolk, an axe-dagger was found associated with the leaf-shaped sword and spear-head, proving the survival of the latter well into our Bronze culture. Arsenical copper, indigenous in Britain, is hard and tough; moreover by slow cooling, copper can be annealed until it is as hard as bronze. The axe-dagger was a makeshift or stop-gap, used until the craftsmen were able to make a cutting sword. It was easily made and widely used, not only in Great Britain and Ireland, but also in Spain, Scandinavia, and elsewhere; admittedly in Germany the axe-dagger survived into the Bronze Age. Why should it be supposed to have died out here before it was superseded by a weapon yet more efficient? It kept the adversary beyond arm's reach, and there was no uncertainty as to its centre of percussion; but the axe-dagger has all the bad as well as the good qualities of an axe as a weapon, mainly, that having made a stroke, it is slow of recovery to make a second, and eventually, in Britain and Europe generally, more weight was put into the rapier blade, thus rendering it a combined thrusting and cutting weapon. There appears to have been some effort made to develop this directly from our indigenous rapier (fig. 13). This, by the associated finds, may help to fix the time when the change was taking place, but the method of mounting the British rapier was its weakness. As the blade grew twenty or more times as long as the separation between the rivets, then comparatively little side strain would cause the blade to lever one of the rivets out of the hilt or to tear itself away from one of the rivets (fig. 8). In this Society's museum there are three British bronze rapiers, two of them torn in this way (fig. 14): two to one is a large proportion, but the best collection of this type of rapier blade is in the Royal Irish Academy: of these about one in every six has proved weak in like manner. It must also be remembered that the hilt would fail as often as the blade.

This method of mounting was weak for the rapier, and it was almost useless for the cutting sword, which imposed a much greater transverse strain on the mounting, thus necessitating an alteration. The tang was reverted to, the base of the blade was narrowed and carried farther into the hilt, and an additional pair of rivets added, making four in all (fig. 15). This form of rapier is impor-

tant yet so far has received but slight attention from writers and has no special name. It is suggested that it should be called 'the transitional rapier', for it was while this method of mounting was in use that the blade underwent the change from tapering rapier (fig. 15) to leaf-shaped,¹ thus forming our first 'cut-and-thrust' sword (fig. 16).

In some rare specimens of this type, the tang was carried yet farther into the hilt, and another pair of rivets added, making six in all (figs. 17 and 17^a).

Having carried the tang through the major portion of the hilt it was obviously better to extend it right through to the pommel, for such a method of mounting is simple, strong, and eminently suited to the cutting sword. But this simple step was not first taken in Britain. It was the method of mounting the Minoan rapier about the sixteenth century B.C. (fig. 18), and became the customary method in Europe until the advent of iron (fig. 19).

Most forms of the incipient sword had their special geographical centres of origin, from which they spread only a short distance, but the cut-and-thrust leaf-shaped sword, with the tang carried through to the pommel, met a universal need and became cosmopolitan. In spite of local differences there is a very striking agreement in bronze swords from various quarters of Europe—an agreement almost amounting to identity, that can only be accounted for by communication. These swords may have been imposed upon some districts by force, whereas other districts received them through the peaceful penetration of trade.

Several continental variants are found in Britain, where their comparative dates can only be assigned typologically. For in Britain associated finds give but little assistance in fixing the comparative dates of these weapons, so many having been found in rivers, where their association, if any, is unreliable. Moreover, about the time of the Arreton Down hoard, and therefore before the arrival of these swords, our ancestors discontinued the practice of burying weapons with the dead warrior, thus depriving us of associated grave-finds which have afforded so much information on the Continent.

Early continental leaf-shaped swords with a tang carried through to the pommel had a lunar butt to the blade (fig. 19) with flanges to hold the hilt-plates. These flanges were found unnecessary, the rivets being sufficient to fix the hilt plates, so the flanges died away. The number of rivets varied, but the grouping remained constant—viz. one group on each side of the butt of the blade and a central group in the middle of the grip. In addition to these, there were one or more rivets for fixing the pommel. The tang sometimes had

¹ See *Archaeologia*, vol. lxi, p. 460.

a supplemental extension for this purpose (fig. 21); when this was lacking, the hilt plates performed this office and were tenoned into the pommel.

Although the change from thrust only to the cut-and-thrust transformed both the blade and the method of mounting it, yet it did not at first materially alter the outline of the hilt, for all that was done was to divide the hilt longitudinally, extending the tang between the halves like a sandwich. The early form was lunar because the hilt divided was lunar, but the longitudinal division of the hilt, the extension of the tang through to the pommel, the supplemental tang for pommel and flanges were all a reversion to the method of mounting the Minoan rapier (fig. 18).

The tang of the blade now forming an integral part of the centre of the hilt, the whole strain of mounting was no longer borne by the rivets in the wings. The lunar portion of the wings, where the joint formerly occurred, underwent modification—the sides became flatter, finally almost straight (fig. 20). Therefore the early type may be termed the U-type, and the later the V-type.¹ U and V are simple, convenient classifications which may be further subdivided as required, for the forms overlap, melting into one another like the colours of the rainbow.²

Many archaeologists believe that the introduction of the U-type of sword into Britain was due to the arrival of a new race bringing these blades with them. These swords appear suddenly, at their zenith; and the biggest and best sword-blades in Britain are of the U-type, more especially of the sub-type having the supplemental tang for the pommel.

Fig. 21 is 2 ft. 7½ in. long—one of the largest complete swords found in Britain, and the one next to it in the London Museum is of the same type but imperfect. If it were complete, it would be 2 ft. 9 in. long or more. This type can be paralleled from Italy (fig. 22) and particularly from Hungary (fig. 22^a). Our best specimens are scarcely equalled, certainly not excelled, by those from any part of the Continent.

The U-type does not occur in the north of England, and there is only one example in the national collection of Scotland (fig. 23); it is from the river Tay, and has not the supplemental tang for the pommel.

Another type of sword occurring in Britain has come to be recognized as alien and of the Hallstatt period. Fig. 25 from the river Tyne is identical with known Hallstatt swords, for example fig. 24, found in a cemetery near Melkendorf in Bavaria accompanied by the characteristic Hallstatt chape, and in adjacent graves were other such swords, some of them of iron.

It is not the number of rivets that establishes identity, but type. Both the

¹ These terms were suggested by Mr. Reginald Smith.

² The U form did not become extinct: its survival into the Hallstatt period is shown in fig. 30.

Tyne sword and the Melkendorf examples have a slight bead running parallel to the edge, and in each the bead runs out about 3 in. from the point (fig. 25^a), whilst at the base it runs round and thickens the edge of the notch (fig. 25^b). These are Hallstatt features.

It was formerly thought that Hallstatt forms were not well represented in Britain, but of late there has been an accumulation of evidence in favour of Hallstatt settlements here, such as the pottery from All Cannings Cross and Eastbourne. Nevertheless, if the Hallstatt swords were brought by settlers it is remarkable that they appear without exception, immediately on their arrival here, to have discontinued their native burial custom, for in no well-authenticated case in Britain has a bronze sword been found associated with a burial.

Many of these Hallstatt swords are found in Britain, mostly coming from rivers on the East Coast—thus it is evident that forms U to late V were filtering into Britain.

There is at least one intermediate alien type that deserves special notice. Fig. 26, from the river Thames (Brentford Museum), is a continental proto-Hallstatt form. This is the best complete specimen in Britain. The blade has usually parallel edges and frequently a carp's-tongue point. Fig. 26^a shows the characteristic details of the hilt. The typical mid-rib is pronouncedly rounded and is outlined at each side by an incised line. These incised lines sweep outward at the *ricasso* following the line of its flanged edge.

Though seldom found here in a complete state, this type of sword occurs in fragments in no less than six founders' hoards in the British Museum, viz. from Addington, Surrey (fig. 27); Beachy Head, Sussex; Chrishall, Essex; and three hoards from Kent, viz. Minster, Isle of Thanet; All Hallows, and another from near Rochester.

Again, in Colchester Museum there is a large hoard from Grays Thurrock, Essex, containing numerous fragments of this type of sword. It is significant that these are all founders' hoards—all from south-east England, and that in all but one¹ of these hoards the winged axe of continental type occurs, usually mixed with indigenous types (fig. 27).

It may perhaps be suggested that as iron superseded bronze for the manufacture of swords at an earlier date on the Continent than in Britain, obsolete continental bronze swords were broken up and traded to this country for founders to re-cast into forms used here.

A typical sword of known home manufacture is shown in fig. 28. It has usually a feebly notched *ricasso* and a fish-tail termination; as a class it is

¹ Chrishall, the whole contents of which are unknown. One of its axes (now in the British Museum) has simulated wings on the socket.

smaller than examples hitherto mentioned. That it was made here is evident from the finding of fragments of moulds in Great Britain and Ireland (fig. 29). This type prevailed in Great Britain and Ireland until the end of our Bronze culture. It was the type found in Heathery Burn cave in England, associated with a cauldron and cast collars for the naves of wheels that cannot long ante-date the iron of Arras, Yorks.; again it was the type found at Duddingston Loch near Edinburgh, associated with hollow spear-heads and a fragment of a cauldron, etc., and also in the Dowris hoard in Ireland (fig. 30), again with a cauldron, trumpets, etc.

The British Bronze culture appears to have favoured the socket; many of our sickles are socketed, a form rare on the Continent; we also made a socketed sword (fig. 31). Socketed swords are rare in England and Ireland, but unknown in Scotland or abroad.

It has often been noticed that many of the late leaf-shaped bronze swords have a notch on either side of the butt of the blade (figs. 24, 25, 26, 28, 30, and 31), and there are many theories as to the use of this feature. To advance them merely to demolish them were waste of time. One theory only fits all the forms that this feature has taken in various times and places. It is therefore desirable to describe it at some length and first to review its later history.

From the time of the primitive sword to the present day it has been customary for some swordsmen to place the thumb and forefinger up the base of the blade and over the quillons, i. e. the cross-guard, to strengthen the hold on the sword (fig. 32). For this reason the base of the blade was left blunt that it might not injure the finger. There being no English word for this blunt portion, the Italian one *ricasso* has passed into our language.

A sword may do three things. It may thrust, cut, and guard, but the combination of all three in one weapon is of comparatively modern date. In early times a shield on the left arm was depended on for defence; and the sword was a weapon of offence only, but a little before A. D. 1500 the art of fencing became common. The sword was used as a defensive as well as offensive weapon. In parrying, the adversary's blade might slip down and injure the first finger. As a protection a ring or sometimes two rings termed *pas d'âne* were therefore added (fig. 33). Prior to this the typical medieval sword hilt had consisted of a grip, pommel, and simple cross-guards, termed quillons. As the art of fencing developed, additional guards, termed counterguards, were added for the protection of the hand, forming the complex swept-hilted rapier of about A. D. 1600 (fig. 34). These rapiers have a pronounced *ricasso*, and were held with one or two fingers over the quillons. Here the *ricasso* is part of the base of the blade, but somewhat later in the *colichemarde* the *ricasso* is treated as part of the hilt (fig. 35). Though the *ricasso* is still used in Italy, placing the

first finger over the quillons went out of fashion in Britain about A. D. 1700, hence on the small sword of about A. D. 1750 (fig. 36) the *ricasso* and *pas d'âne*, though reproduced in miniature, are too small for service, for man had fashions in weapons as well as in costume. The *ricasso* still lingers on many sword-blades mounted in hilts of such a form as to render its use impossible (fig. 37). In short, the *ricasso* is a blunt part at the butt of the blade, intended for the first finger to get a grip over the quillon or some similar projection. It is sometimes treated as part of the blade, and at other times as part of the hilt.

Now to return to the prehistoric. The *ricasso* made an early appearance in conjunction with quillons, on the wonderful bronze rapiers of the Minoan culture (fig. 18). These rapiers were obviously held with the first finger over the quillon, the upper surface of which forms the *ricasso*, here treated as part of the hilt. On some late swords (fig. 38) the form, to a swordsman, needs no label — 'the forefinger to be placed here'! The same is true of the Rhone valley type (fig. 39) with a deeply notched *ricasso*, frequently milled.

In a copper or bronze sword found in Egypt, now in the British Museum (fig. 41), the *ricasso* is treated as part of the hilt, and takes the form of a slightly curved recess for the first finger. The *ricasso* is always duplicated, because all the bronze swords under consideration are two-edged and symmetrical.

The evolution of the *ricasso* on British bronze swords may now be briefly reviewed. It was unknown on the early British rapier, but made its first appearance here on the transitional rapier (fig. 15). At first it was only a bluntness at the base of the edge of the blade extending about 1 in. upward from the hilt; there were no quillons, but the projection of the hilt served as a grip for the forefinger. A little later, in this type of rapier, the *ricasso* was very pronounced, sometimes terminating in an abrupt line at right angles to the edge of the blade (fig. 40). It was frequently milled (fig. 16^a) to give a better hold. This may be accounted for by the fact, that the transitional type of rapier was evolved under strong continental influence. Fig. 42 is a rapier which, from the associated grave-finds, is known to be the type immediately preceding the cutting sword in France. It is usually mounted with four rivets, in two pairs, and has a notched *ricasso*, frequently milled on the edge (fig. 42^a). The milling became a prominent feature in the finest swords of the U-type (fig. 21^a), though scarcely perceptible on the face of the blade (fig. 21). A few blades of U-type have the notched form of *ricasso* (fig. 43), an indication that the example is late in the U-class, for it was in the V-class that the notched form of *ricasso* became general (fig. 20).

The late form of the notched *ricasso* becomes less efficient, for in the Hallstatt period the use of the *ricasso*, together with that of the point, went out of fashion. Although the leaf-shaped sword was, at first, a combined cutting and

thrusting weapon, yet in course of time the cut was used to the exclusion of the thrust. In the Hallstatt period both the point and the *ricasso* atrophied, and are absent from La Tène iron swords; therefore, as we approach the Hallstatt period, we find the *ricasso* in a dying form. In the Society's museum is a Hallstatt sword (fig. 44) with a *ricasso* of little more than half an inch in length, too small for efficient use. Again, there are other examples of Hallstatt swords in which the edge of the blade terminates in an acute angle (fig. 45). As this would be uncomfortably sharp for the finger, it would appear that the *ricasso*, though present, was not used at that period.

This fashion in the form and use of the *ricasso* is of assistance in determining the relative dates and dispersal of types. For example, the transitional rapier is confined to the Thames Valley; the leaf-shaped sword that followed it is found in the south of England, Wales, and Ireland. Two of the Irish examples are notched. No known English example is notched. Thus, the early form occurs in England only; the intermediate stage in England, Wales, and Ireland; the late stage in Ireland only. It is therefore a fair deduction that the type spread from the Thames west to Wales and Ireland. It apparently remained unknown in the north of England and Scotland.

Those who hold that bronze was introduced into Europe from the Orient call attention to an alleged shortness of the grip of bronze swords, and state that they were intended for a race having small hands.¹ This is a misconception. If the sword be properly grasped, with the forefinger on the *ricasso*, the hilt is large enough for the hands of most modern men. This explanation of the method of holding the bronze sword is not new, for so long ago as 1861 Sir William Wilde, in his catalogue of the Royal Irish Academy, p. 455, observed 'the mode of using these weapons must not be forgotten . . . the middle, ring, and little fingers alone grasp the handle completely, while the thumb and forefinger pass upward on each side of the blade'. Also the late Sir John Evans states (p. 276): 'I must confess that I regard this view of the smallness of the hilts as being somewhat exaggerated. . . . The part of the hilt where it expands to embrace the base of the blade was, I think, probably intended to be within the grasp of the hand, and not beyond it, as a guard.' Nevertheless, neither he nor Wilde recognized that the method of holding the weapon accounted for the *ricasso*. Many archaeologists have ignored all forms of the *ricasso* save that of the notch, and have disregarded its variants, for theories that the notch was to retain a cross guard or a strap like that on a policeman's baton, entailed the permanent covering of the *ricasso*. Any such theory may be rejected. For on many bronze swords, when the *ricasso* was treated as part of the blade, it was

¹ Avebury, *Prehistoric Times*, 6th ed., p. 30.

distinguished from the rest of the blade by being the only part decorated (figs. 46 and 47). This was also a continental custom (figs. 48 and 49). It would be giving Bronze Age man less than his due to imagine that he decorated only the part intended to be covered permanently.

A suggestion may now be offered as to the use of another feature, the winged chape (fig. 50). This form is found not only in Great Britain and Ireland, but also in France, Bavaria, and elsewhere. Its evolution is known, but so far there has been no satisfactory explanation of its use—indeed it has been regarded as a mere freak of fashion.

It is never found associated with a short sword, but only with the long Hallstatt type (fig. 51). The first step towards a right appreciation of its use is to realize how this weapon was worn.¹

When the incipient sword was in the dagger stage, it was worn thrust into the right side of the belt. When the dagger grew longer and became a sword, it would be moved to the left side in order to facilitate unsheathing it. As the blade grew longer it would be increasingly difficult to draw it from the scabbard, particularly if the scabbard chanced to draw up in the belt. It must be remembered that the warrior carried a shield, hence his left hand was not free to assist in the process, but by taking hold of the sword hilt with his right hand, and hooking the chape behind his left thigh, he could hold down the scabbard, making sure of unsheathing the sword single-handed. These chapes may therefore be termed Anchor Chapes. This theory receives confirmation from the fact that when the flukes were lengthened and used in this manner, they were capped at the ends to prevent injury to the wearer (fig. 50). Again in the succeeding La Tène period, when the metal chape became part of a complete bronze scabbard, many British examples have an indigenous feature—viz. a loop a little above the middle of the length.² This is for attaching the scabbard to the belt and therefore performs the office which (it is submitted) the anchor chape had previously performed. The anchor chape then atrophied, and the flukes, being no longer of use, were bent back as an ornamental feature, merging into the binding of the scabbard (fig. 52).

If, on the one hand, it were indispensable that sword-blades be made of metal, on the other hand, the hilt might be of less precious and more easily obtainable material, and our frugal ancestors had grip plates of horn. Hilts of

¹ The suggestion that this chape was worn trailing on the ground like that of a modern cavalry officer is absurd. First, had it been so trailed it would show signs of wear, which not one of them does. Secondly, picture a warrior rushing to the fray with this anchor-like appendage dangling at his heels; it would catch on the first projection and send him headlong.

² On the Continent and sometimes on British scabbards of La Tène period the loop is at the mouth of the scabbard, for the iron sword grew so long that it was necessary to have not the middle of the scabbard but the mouth at the belt level, to enable the blade to be drawn.

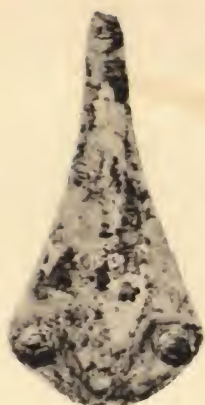
bronze are rare in this country; those which are indigenous usually follow the form of the horn hilts, i. e. they have a kidney-shaped pommel (fig. 53). It has been assumed that bronze-hilted swords are of later date than the customary ones with plates of horn or bone, but the two types have been found associated, as in Edinburgh (fig. 54). The deduction is that they were contemporary, but in Britain the bronze hilts were only within the financial reach of the few. On the Continent the taste for luxury outweighed economy, and many late bronze swords have bronze hilts, some of them fancifully twisted in a manner that at first appears foreign to such a rigid and brittle metal as bronze (fig. 55).

Just as the change from flaked flint to moulded metal resulted in a change of form, so likewise every fresh method of fabrication naturally brings with it certain peculiarities, which in the hands of a craftsman give the work an individual character. Therefore before treating of bronze hilts it is desirable to give some account of the process which became common on the Continent and influenced their forms, viz. the *cire-perdue* process. If the object to be cast were to be of solid bronze, the first step would be to make a model of it in beeswax. If the object were to be hollow, the first step would be to make the core of clay, then bake it and cover with wax modelled to the required form. This was then coated with a fine paste of bone ash and other ingredients, and embedded in a larger clay mould, the whole heated until the wax melted and ran out, and the mould was thoroughly baked. Bronze was then poured into ducts leading to the cavities formerly occupied by the wax. The process is not so simple as might at first appear: for example, if the work were to be hollow, provision had to be made for steadying the core. Fig. 56 is a thin bronze chape from the river Thames showing half a dozen rectangular pieces of wire which had been passed through the core to prevent it moving during the process of casting. These wires, termed chaplets, were ultimately trimmed off, when the casting had been taken from the mould and the core extracted. The chaplets are of a different composition from the rest of the casting. The important point is that this process gave scope to the artist for indulging his fancy, ornamenting and undercutting the soft wax model, every detail of which was faithfully reproduced in the rigid bronze casting. Hence appeared a system of casting bronze as though it were flexible, which was only possible by the wax process (fig. 55).

It is mainly to the Continent that we must look for the results of the *cire-perdue* process. In the South German or Austro-Hungarian hilt (fig. 57) the pommel underwent development. When made in metal, at first it grew thinner, then bigger; and from being flat, finished in a cup, with the edges of the pommel upturned. Fig. 48 could not have been cast in ordinary double moulds, for the upper half would not have lifted off without fracture. In the Rhone



1. Mere Down, Wilts. (*c.* $\frac{1}{2}$)



3. Butterwick, Yorks. (*c.* $\frac{1}{2}$)



4. Helperthorpe, Yorks. (*c.* $\frac{1}{2}$)



2. Normanton Bush Barrow, Wilts. (*c.* $\frac{1}{2}$)



5, 6. Blackgate Museum, Newcastle (*c.* $\frac{1}{4}$)



7. Thames: Brentford Museum (*c.* $\frac{1}{4}$)





8. Lissane, Ireland
(c. 4)



9. Section of fig. 8



10. Spear-head, Snowhill,
Glos. ($\frac{1}{2}$)



11. Axe-dagger (halbert) (c. $\frac{1}{2}$)



13. Wallington, Northumberland (*c.* $\frac{1}{2}$)



14. Thames: Society of Antiquaries (*c.* $\frac{1}{2}$)



12. Group from Islay: National Museum, Edinburgh (*c.* $\frac{1}{2}$)



15. From site of County Hall :
London Museum (c. $\frac{1}{2}$)



15 a. Detail of fig. 15 (c. $\frac{1}{4}$)



16 a. Detail of fig. 16 (c. $\frac{1}{4}$)



16. Colchester Museum (c. $\frac{1}{3}$)

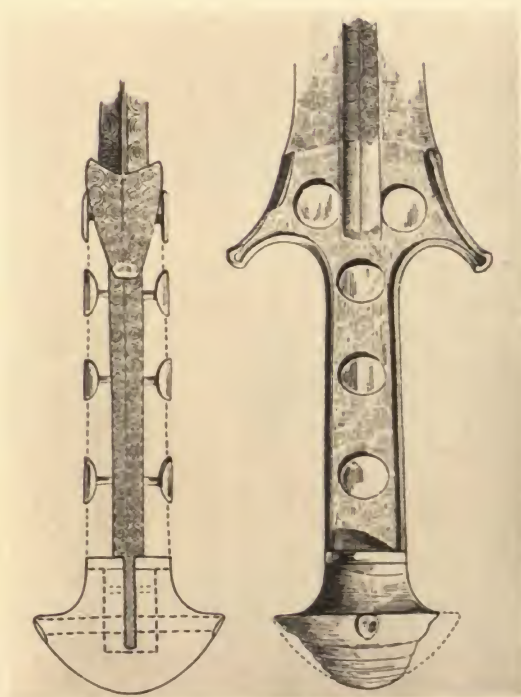




17. Benson Ferry :
Ashmolean Museum
(c. $\frac{1}{4}$)



17 a. Detail of fig. 17 (c. $\frac{1}{2}$)



18. Minoan rapier—detail ($\frac{1}{2}$)



19. U Type
Brentford Museum (c. $\frac{1}{4}$)



20. V Type
Brentford Museum (c. $\frac{1}{4}$)





21. Thames: London Museum (c. $\frac{1}{4}$)



21 a. Detail of fig. 21 (c. $\frac{1}{4}$)



23. U type, River Tay: National Museum, Edinburgh (c. $\frac{1}{4}$)



25. River Tyne: Blackgate Museum, Newcastle (c. $\frac{1}{2}$)

24. Melkendorf, Bavaria (c. $\frac{1}{2}$)



22 a. Hungary—detail (c. $\frac{1}{2}$)



22. Italy—detail (c. $\frac{1}{2}$)



25 a



25 b

Details of fig. 25 (*c.* $\frac{1}{2}$)



26. Thames:
Brentford Museum (*c.* $\frac{1}{2}$)



26 a. Detail of fig. 26 (*c.* $\frac{1}{2}$)



Given by Sir Hercules Ross, 1914.

27. Hoard, Addington, Surrey: British Museum (*c.* $\frac{1}{2}$)

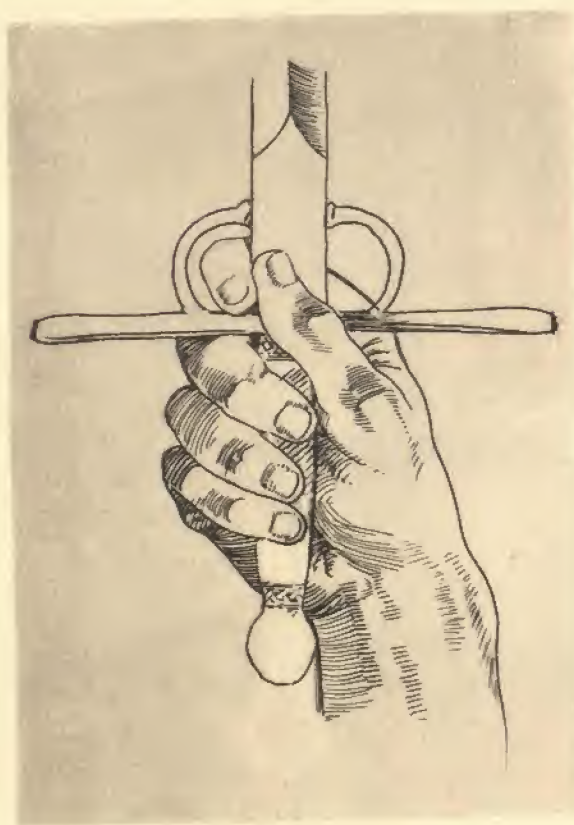




28. Thames: Parker Brewis Collection (c. 1/2)



29. Part of mould for sword hilt: Traprain Law, Haddingtonshire (c. 1/2)



32. Method of holding the sword



30. Dowris, King's Co. (c. 1/2)



31. Hoard from Whittingham: Blackgate Museum, Newcastle (c. 13th)



33. Late 15th century sword (c. 14th)



34. Rapier





38. British Museum (*c.* $\frac{1}{4}$)



35. Colichemarde



36. Small sword



37. Service pattern
hilt



40. British Museum (*c.* $\frac{1}{2}$)



39. Rhone valley
type (*c.* $\frac{1}{4}$)



41. Egypt: British Museum (*c.* $\frac{1}{2}$)



42. France: British Museum (*c.* $\frac{1}{4}$)



42 a. Detail of fig. 42 (*c.* $\frac{1}{2}$)



43. U type, Mortlake (*c.* $\frac{1}{2}$)



44. Hallstatt sword: Society of Antiquaries (*c.* $\frac{1}{2}$)



45. Hallstatt sword: Scarborough Museum (*c.* $\frac{1}{2}$)



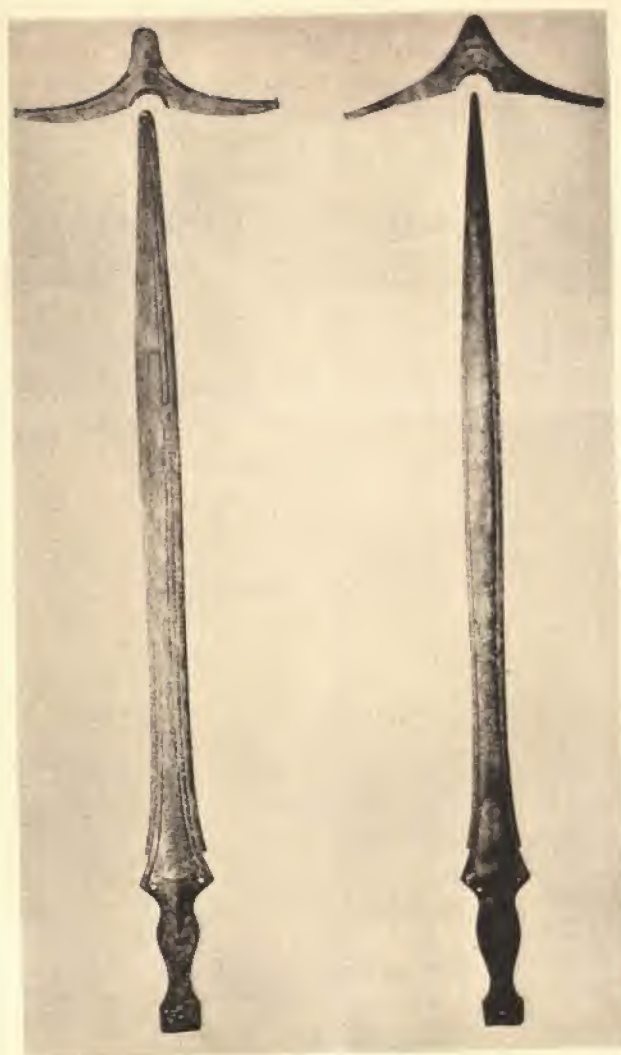
46. Wetheringsett: Norwich Museum (*c.* $\frac{1}{2}$)



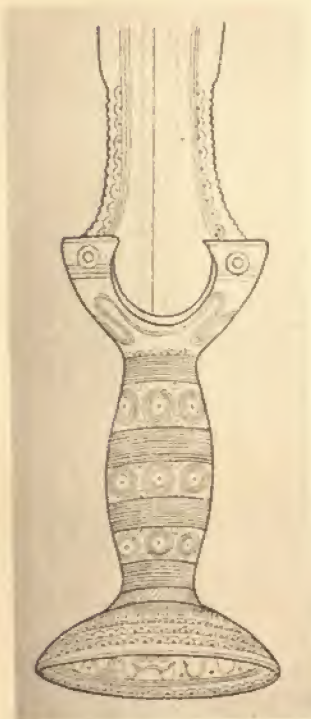
47. Thames: London Museum (*c.* $\frac{1}{2}$)



49. Swiss Lake Dwellings (*c.* $\frac{1}{2}$)



51. Hallstatt swords with winged chapes (*c.* $\frac{1}{2}$)



48. South German type (*c.* $\frac{1}{2}$)



50. Winged chape (*c.* $\frac{1}{2}$)



53. Yorkshire: Alnwick Museum (*c.* $\frac{1}{4}$)



55. Antennae sword, Lincoln: Alnwick Museum (*c.* $\frac{1}{4}$)



52. Bronze scabbard with chape, La Tène period: London Museum (*c.* $\frac{1}{2}$)



54. Hoard, Edinburgh: National Museum, Edinburgh (*c.* $\frac{1}{4}$)

1. The first of the two is a list of the names of the various parts of the body, and the second is a list of the names of the various parts of the mind.

2. The first of the two is a list of the names of the various parts of the body, and the second is a list of the names of the various parts of the mind.

3. The first of the two is a list of the names of the various parts of the body, and the second is a list of the names of the various parts of the mind.

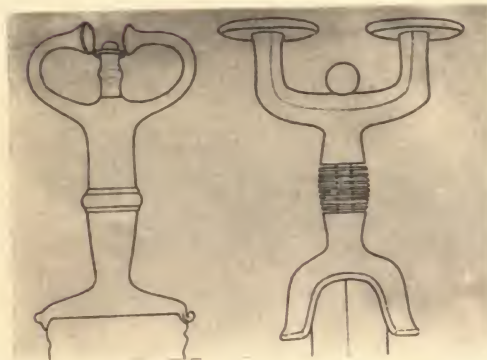
4. The first of the two is a list of the names of the various parts of the body, and the second is a list of the names of the various parts of the mind.



56. Bronze chape from Thames :
London Museum (*c.* $\frac{1}{2}$)



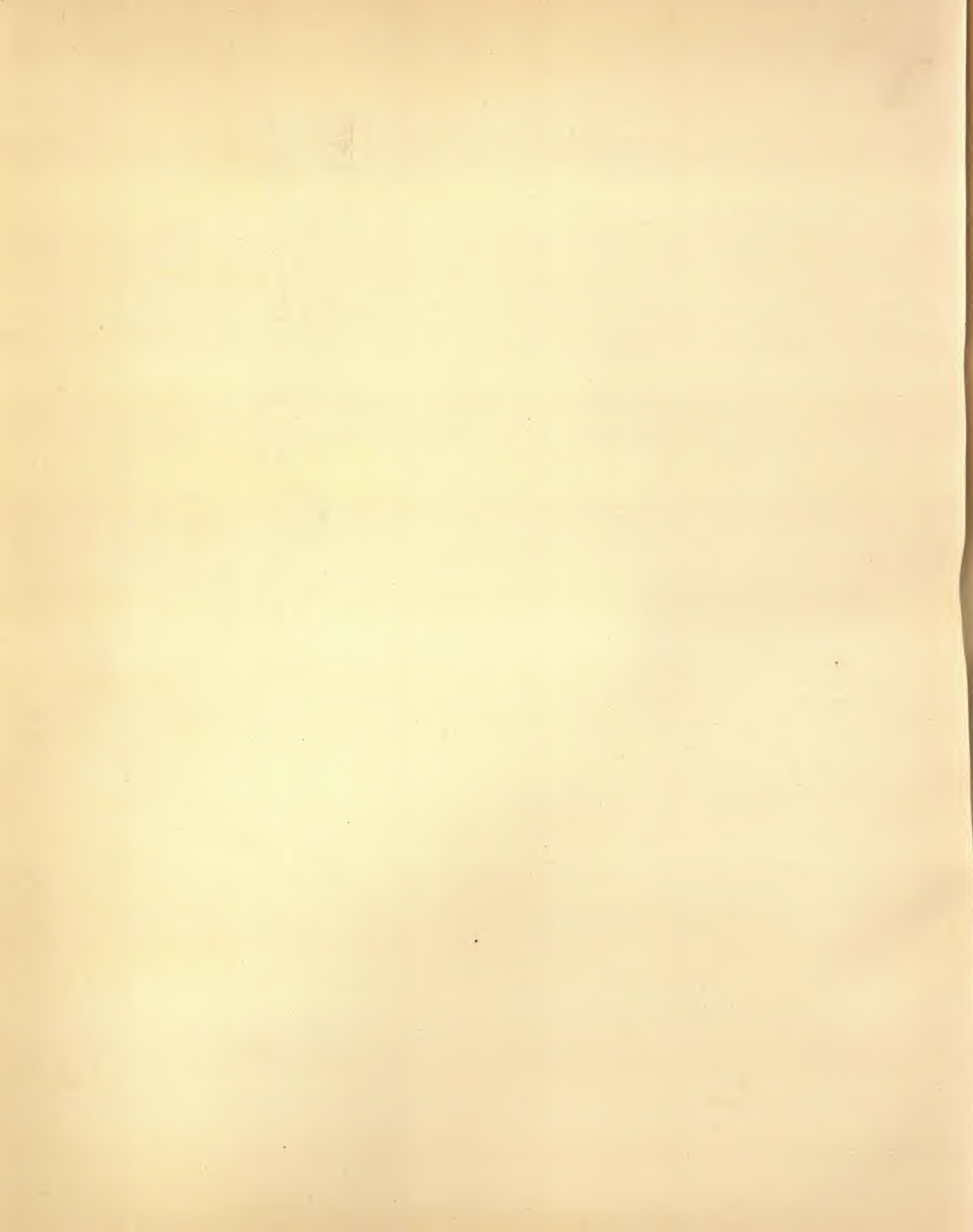
57. South German or Austro-Hungarian
type of bronze hilt (*c.* $\frac{1}{2}$)



58, 59. Continental horseshoe pommels (*c.* $\frac{1}{4}$)



60. Yorkshire : Hull
Museum (*c.* $\frac{1}{4}$)



valley type, the bronze hilt at its junction with the blade developed quillons, and at the other extremity of the hilt the oval pommel began to curl up at the ends (fig. 39).

Out of these types with upturned extremities to the pommels was evolved a new form, the Antennae type (fig. 55), by the simple process of lengthening the extremities of the pommel and rolling them into a spiral. The salient riveting button and the antennae were very fashionable in the Hallstatt period, and at times the pommel was horse-shoe shaped (fig. 58) in lieu of the usual volute. This Antennae type of hilt has been found over a considerable portion of the continent of Europe and passed into Britain (fig. 55). These swords were not evolved here, and the few found have been imported, with the exception of that from Whittingham, Northumberland (fig. 31). This pommel has not the usual continental salient riveting button, but is mounted on a socket, and belongs to an indigenous socketed sword. Therefore it is probably a native product, but modelled under the influence of the continental Antennae type. If this be conceded, the Whittingham hoard (fig. 31) is of high importance in dating our Bronze culture, for this horse-shoe pommel cannot be earlier than the Hallstatt type from which it is derived, thus proving that the last phase of our Bronze culture corresponds with the continental Hallstatt period.

The trumpet mouth termination of the horse-shoe pommel is a characteristic *cire-perdue* product, which could not have been cast in a double mould, for the halves could not have been separated without damage. In place of the trumpet mouth, some continental examples have knobs or discs (fig. 59). This arrangement readily suggested the human form. Here, also, the *cire-perdue* process aided the transformation into still more fantastic shapes—the riveting button became a head; the antennae, arms; the barrel of the grip, a body; the bifurcation at the heel of the blade, legs; hence the Anthropoid sword (fig. 60). Although these hilts are usually of bronze the blades are of iron; and as they belong to the early Iron Age are beyond the range of this inquiry.

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